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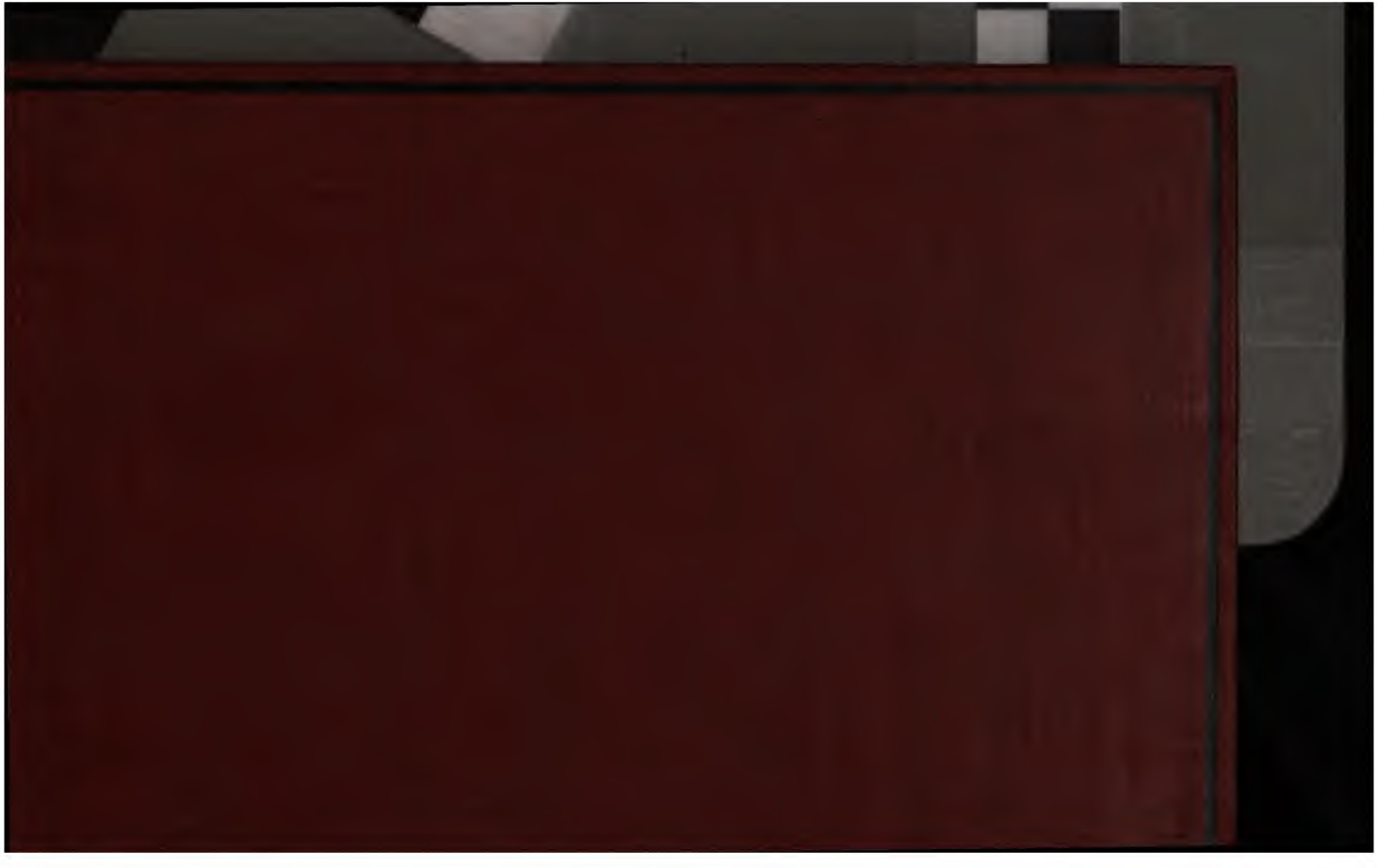

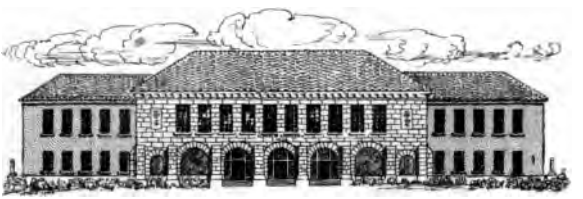

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METHODS OF KNOWLEDGE

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METHODS OF KNOWLEDGE

AN ESSAY IN EPISTEMOLOGY

BY

WALTER SMITH, PH.D.

PROFESSOR OF PHILOSOPHY IN LAKE FOREST UNIVERSITY

New York

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PREFACE

SOME parts of this work have already been published in articles in the philosophical journals. The germ of it is in an article that appeared in *Mind* for October, 1895; and a few of the discussions have been presented in *The Philosophical Review*, *Education*, and *The International Journal of Ethics*. I wish to thank the editors of these journals for the courtesy by which I have been allowed to make use of this material. The portions of it which have been selected have been in most cases considerably changed.

I wish to express my indebtedness to my brother, Professor William G. Smith, of Smith College, for criticisms and suggestions.

WALTER SMITH.

LAKE FOREST UNIVERSITY,
July, 1899.

DECORATION FOR THE WISCONSIN STATE CAPITAL BY HUGO BALLIN

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METHODS OF KNOWLEDGE

INTRODUCTION

1. "Who loves not knowledge?" "The desire to know," says Aristotle, the master of them that know, "is natural with all men, and an evidence of this is the love we bear our senses, they being loved for themselves alone even apart from their practical use;" and he further finds that man has his perfect happiness in the exercise of his rational faculty. Aristotle in ascribing supreme value to truth is only expressing the conviction of very many of the sages of antiquity.

Knowledge is desired not less earnestly in modern times. The zeal shown in its pursuit is one of the remarkable characteristics of the present age. It would be too much to say that the love for science and philosophy is greater now than in ancient times. It would be difficult to match the enthusiasm of Plato or Aristotle. There was, similarly, an ardour in the love of the early Christians, which in the present day is seldom, if ever, reproduced. There

is generally a glow in the zeal of pioneers which their successors do not exhibit. Yet the work of the pioneers, if it prove of value, can still call for devotion and sacrifice. Christianity is probably more fruitful now than at any period in its history. And, likewise, the devotion of modern workers for knowledge, if less rapturous than that of its first great apostles, is not less capable of disinterestedness. Some may say with Spinoza and Hegel that knowledge is the highest ideal of life; and many, who hesitate to go so far in words, show that they are offering their lives on the altar of science.

2. Not less remarkable is the modern advance of knowledge. Many questions which baffled the ancients have been answered. Many illusions which dazzled them have passed away. Moreover, many problems in mental and physical science of which they did not dream have presented themselves and have received their solution. The conquests of science are among the greatest achievements of modern times.

3. The knowledge thus gained is gradually working a revolution in the world. The advantages attending the revolution are apparent. By means of science man is able to control nature and to increase the comfort of life. The discoveries of physics are followed by mechanical inventions; the researches

of the physiologist and pathologist are made tributary to the medical art; psychology teaches how the mind should be trained. In every sphere of life it is being found that science is giving men new and better methods of living. Even in the redemption of those who are evil the procedure is becoming more scientific. The crimes of men are not regarded as the expression of an inexplicable freedom, as if a thunderbolt had fallen from a clear sky, but are traced back to physical and mental antecedents; and this knowledge of their relations is turned to account in the work of reformation and prevention. Moreover, science is inducing a certain habit of mind in the contemplation of the universe. The world is no longer thought of as full of capricious and malevolent powers. Everywhere there is felt to be order and unchanging law. Light has come into the world, and superstition and other creatures of the night have vanished. And many other benefits might be credited to science. If these are the works of knowledge, who would not love her. "Let her mix with men and prosper."

4. This revolution, however, has phases of a more doubtful kind. The knowledge which is most eagerly sought is of the kind yielded by the positive sciences. These sciences profess to offer nothing but facts and the principles or laws on which these

facts may be strung. A system of Positive Philosophy is thought to present the sum of knowledge. There has consequently come into view a certain want of harmony between science and other important human interests.

Thus it seems to come into conflict with the moral consciousness. It represents man as simply part of the world of phenomena, woven like everything else into the network of causes and effects, or sequences and coexistences. It considers him only in these relations, and finds in him no other value. Further, science shows its opposition to morality in its neglect of human emotions. Even when these are considered by the science of psychology, they are studied in that dry light which Bacon commended; they are viewed simply in their casual connection with other facts. It is charged against the scientific man that he can "peep and botanize upon his mother's grave."

There is a similar opposition between science and art. There is, indeed, a sense in which science helps art, even as it helps morality. When science cultivates close attention to the details of objects, the art which aims at the faithful reproduction of the appearance which things present to the senses is promoted. But when art claims to find pleasure in the colours and sounds of the world, science is

indifferent; and if the artist claims, further, that he feels, as he moves among the objects about him, the throb of their inner life, his pretensions are met with scepticism. Even æsthetics has a certain alienation from the sentiments it investigates.

Again, science wears a look of indifference or hostility toward religion. The scientific way of looking at the world is not the religious way. Science is interested only in facts and their connections; religion regards the world as derived from and guided by a living Being. It is interesting to observe that Spencer assigns to science, as its province, the knowable; to religion, the unknowable. True, science also ultimately admits that there is an unknowable, but it is the business of science to follow out the knowable, as it is that of religion to recognize the unknowable. This theory points, at least, to the conviction that science, in prosecuting its task of investigating facts, does not find any object of worship. Since there is this conflict, and since science absorbs attention in an increasing degree, religion, which was wont to be the supreme interest, must have its territory correspondingly reduced. The revolution is great and is of momentous import. It should be added that even the science of theology has often a blighting effect upon piety.

5. The revolution wrought by science is not confined to a small academic circle. The diffusion of science in the present age is wide and rapid. The democracy is claiming equality in knowledge as well as in political rights. Many truths which were formerly the rare treasures of intellectual aristocrats are now the common possessions of our school children. In fact, science has become the great instrument of mental training, and there is given up to it an increasing portion of the time devoted to education. Even literature is often studied according to the methods of science, and the culture which in such cases it gives is little different from that given by chemical and physiological researches. It is not to be understood that those who advocate science as yielding the best education always mean that it is an end in itself; they may say that the end is mental discipline, or even moral culture. The significant fact for the pupil remains that science has for so long a period occupied the attention, and that the mind has learned the scientific way of looking at the world.

6. In view of the claims and influence of science, it is of the first importance to ask, what it is to know. The inquiry is not, indeed, of merely present interest. It is not one belonging to the exigences of a particular intellectual crisis; it is

of importance whenever there are seekers after truth. But now the need for it is more pressing than ever, and it is a question for every one. We have to ask whether that which is now offered to the world as knowledge is entitled to be so regarded, and, if the present methods of knowledge are wrong, what is to be substituted for them.

7. The protest may at once be made that in the above account of knowledge and the problems which it raises the achievement of philosophy is neglected. Knowledge, it will be said, is not to be identified with science. Science is abstract; the categories of science are finite; philosophy finds fault with science as giving at best only half-truths. Philosophy, on the other hand, has the full-orbed vision; it claims that it avoids abstractness, and that its categories are infinite. It, therefore, denies that there are elements in life which it has failed to recognize, and it asserts that it has found the method of absolute knowledge.

The claims thus made by philosophy must receive later careful consideration. At present a complete estimate of them cannot be given. It must, however, here be pointed out that science and philosophy are alike in this respect, — that both seek knowledge in conceptions or universals.

8. For it is here that we come on the assumption made by all theories of knowledge alike. While much labour has been devoted to these epistemological problems, while Locke and Kant, Hegel and Spencer, have all grappled with them, the conclusions reached have all been vitiated by the assumption made as to the constitution of knowledge. It has been taken for granted, for the most part, that the method of science and philosophy is the right method in so far as universals or laws are sought. There have been disputes as to the proper procedure in induction, but not as to the character of the knowledge which induction yields. That has been regarded as something fixed, like a fact, or event, which is something to be investigated, but which is not to be annulled by any process of investigation. Even the empiricist, as we shall see, does not discard universals; he only gives another version of them; like the transcendentalist, he tries to analyze the content of science, but does not contend that that content should be different.

9. But this view of knowledge must be subjected to criticism. It must be asked whether this mode of knowing is the only mode, and whether it gives knowledge, in the true sense, at all. When men were discussing the power inherent in

matter, Berkeley asked the prior question, What is matter? So it is necessary in discussions regarding knowledge that there should be a criticism of the factors thought to constitute knowledge.

10. The questions before us are not primarily psychological. Knowledge is a thought which is somehow related to an object, and the aim of the present work is to consider what that relation is, or what it may be made. Psychology, on the other hand, studies the processes of the mind without considering their cognitive value. It asks whence our thoughts come, and what elements their analysis yields, but does not inquire into their fitness to represent other things. The present inquiry, therefore, belongs to the epistemological department of philosophy. At the same time, psychology is indispensable to the success of such an inquiry. For, if we would rightly estimate the value for knowledge of conceptions or other mental factors, we must determine what the materials are which have gone to their making, the images, emotions, abstractions, of which they are the resultant blend. The work at which Kant laboured was a criticism of conceptions, and Kant's results are marred because of the imperfections of his psychology: he does not know the history of the conceptions, and so fails to appreciate rightly the

function. The cry has often been heard, "Back to Kant." And it is a summons to be heeded. But comparatively little result has followed from the renewed study of the great master, because the examination of his results has not been carried on in the light of a true psychology. It is not too much to believe that, when Kant is studied under the illumination of this new science, the result of the return to him will be in a true sense an advance upon him.

11. The work of Locke and Kant is not yet accomplished. The theory of knowledge must benefit by the more thorough analysis of modern research. And the result of this investigation is to show that the method of science and philosophy must be discarded. Science has been called a "mushroom growth," and even philosophy is not old. And though it were much older, the present conception of knowledge has no inalienable right to the place it occupies. Its sway may be only an episode in the history of thought. I think that it can be traced to its origin in a certain definite philosophical theory, and that the theory can be proved to be a mistake. It is, therefore, one of the objects of the present work to show that what is now offered as science is not truth: that science, physical, mental, moral, philosophical, is not truth;

that no science singly can give it, and that all together fail. It is then to be shown that for the attainment of truth a new method must be developed.

12. It is necessary at the outset to guard against a misapprehension. It may be said at once that such a view as that indicated must be fantastical, and that to bring an indictment against science is to repeat the folly of ordering the ocean to retire. It is, however, to be observed that science is not said to be useless. It is profitable for many things. It would scarcely have reached the place it occupies had it not served some of the great ends of living. It is, too, indispensable in the search for knowledge. It is not, indeed, knowledge. Though it has usurped the place of knowledge, it is not the heir to that throne. Yet, though not the heir, it should be one of the chief ministers of knowledge, and its work can be used for knowledge. Especially is it to be noted that there is no quarrel with the spirit of science. The devotees of science have had truth as their ideal, though they have not shown discernment in their efforts to reach it. They are like that ancient religious people who needed that the God they worshipped should be declared unto them. The impulse to know, though approving itself one of the

of human evolution most worthy of admiration, needs to be guided by a criticism that is ever more careful and comprehensive. And since science has this ideal and this enthusiasm, he may be its most faithful friend who seems to be dealing it wounds. He is not necessarily an enemy of the democracy who does not look on the republican form of government as the ultimate political constitution. He may have most of the spirit of science who refuses to regard its methods as above criticism.

13. It is the plan of this investigation to give first a definition of knowledge. The methods will then be considered by which men have thought it possible to attain knowledge of the self on the one hand, and the not-self on the other. Those who have not begun to reflect believe that they get truth in the data of the senses. This view will be criticised, and at the same time an estimate will be made of the contribution which sensation offers to truth. The common view of philosophers and scientists, that truth is given in general concepts, or universals, or categories, will next be taken up. The special form of the doctrine given in empiricism will also be considered. It is a doctrine that is found wanting in all its forms. At the same time it will be pointed out that the concept has its uses in the mental economy. The

true method of knowledge will then be expounded. The method of knowing the not-self will be first investigated; and it will be shown that this knowledge is gained by sympathetic imitation. But as this method involves the use, to a greater or less extent, of the other methods, emphasis will be laid on what is called the "synthesis of the methods." After this discussion of the conditions under which knowledge of other things is possible, it will be a relatively short task to determine wherein self-knowledge consists. In conclusion, the bearing of this theory on the philosophical problem, and also on certain practical questions, will be indicated.

CHAPTER I

DEFINITION OF KNOWLEDGE

1. In order to determine the function of knowledge, it is necessary to take a brief survey of the great philosophical theories. Such a survey is, in one sense, disappointing, for the question, What is knowledge? is one that has received too little attention from philosophers; even in modern times, when epistemology has often been the exclusive topic of philosophy, a definition of the relation which subject and object sustain in knowledge has been too little attempted. Yet theories of the universe have certain views of knowledge as their presupposition, even when these are not adequately discussed, and the consideration of such will be the proper preparation of the way to a definition of knowledge.

2. The theory was maintained by some of the early Greek philosophers that like is known by like. The doctrine may be best appreciated by reference to the system of Empedocles, who explained the sense in which he understood it. He taught that

there are four elements in the universe, — fire, air, earth, and water. There are besides two forces which act on these elements,— love and hatred. While hatred destroys their unity and scatters them, love or friendship joins them together. By this process of joining together, the cosmos is produced; earth and stars and human beings are formed. The knowledge which the intelligence of man has of the world of things outside him is rendered possible by the fact that he is composed of the same elements as those that are found in things; and each of the elements in him recognizes the element outside him to which it is akin. The air is known by the air in him; the fire by the fire; the earth by the earth; and the water by the water.

The theory as thus stated seems crude as a picture painted by a child. Yet it is to be appreciated properly only if its presuppositions are understood. It was the product of an age when the world was interpreted in terms of a simple animism. Fire and air were not dead things; they were living, like human beings; the principles that joined them together were not mechanical, they were love and hatred. These living elements blend in the human soul, and they reflect the life corresponding to them. The living, conscious fire and air in man are like the living, conscious fire and air in other things

The doctrine of Empedocles thus loses the crudity of its first appearance and becomes a suggestion toward a profoundly spiritual theory.

After all that may be said for the theory, it must be admitted that it fails to offer a complete account of knowledge. The material and spiritual are so mixed that we cannot look for a clear statement of the relations subsisting between conscious elements and their objective counterpart. Moreover, the self-knowledge of the elements, exhibited in the case of man, is not yet explained. Yet the statement that like is known by like formulates a view of knowledge that is of extreme importance, and one that was a natural product of the Greek mind. The unity of spirit and nature has often been referred to as characteristic of Greek ideas. The Greek did not think of nature as something alien from man and lower. It is also true that he did not think of the gods as inaccessible to man: they are human. Man is thus one among many objects of like quality. This attitude toward the world found its parallel in the assumption regarding knowledge. It was taken for granted that thought can measure reality, and that there is nothing to shut out the spirit of man from the objects about him. Philosophers, therefore, laboured to define the reality which seemed so certainly

within their mental reach. Their reflection on this function of knowledge was expressed in the maxim of Empedocles.

3. The next important contribution toward the definition of knowledge is to be found in the idealistic system of Plato. For it is to him rather than to Socrates that we need here to turn. Socrates, though the author of the philosophic faith of Plato and Aristotle, has not developed his system sufficiently to raise the special problem of the relation which in cognition subject bears to object.

Plato teaches that there is a world of ideas existing independently of the mind. The idea is the universal, the common concept, or notion. It is that which abides while individual things change and pass away. Thus, there is a multiplicity of beautiful objects, but beauty in itself is other than they. They are beautiful because they share in it; they are imperfect because they are only broken lights of it. It is eternal and perfect. Moreover, the idea is the real; to it individual things owe such reality as they have.

Knowledge is the contemplation of these ideas. The soul sees them. It looked upon them before it was imprisoned in the body, and even in this world it can so purify itself as to enjoy the visi-

of them. The bliss of the future life will consist in the beholding of them.

Thus Plato seems to regard knowledge as something visual.[1] The object is something to which the eye of the soul is directed. This is the natural, naïve view of knowledge; to look at a thing and to know it are the same. And so far, the Platonic contribution to epistemology seems of little value.

Yet, though Plato so often speaks of knowledge in terms of sight, he has also given evidence that he has another conception of the relation between subject and object. Thus, he says the "true lover of knowledge will go on until he have attained the knowledge of the true nature of every essence by a kindred power in the soul, and by that power drawing near and mingling and becoming incorporate with very being, . . . he will know and live and grow truly."[2] It is by a "kindred power in the soul" that the subject knows the object: Plato finds in knowledge the similarity of subject and object, if not a closer relation. His teaching is similar when he declares that the realities of the universe are rational; and also that the good is the source alike of knowing and being.

[1] Cf. Windelband, *Geschichte der Philosophie*, p. 92.

[2] *Republic*, 490 (Jowett's Translation).

4. It was the task of Aristotle to modify and develop the doctrine of Plato. The form of Aristotle takes the place of the idea of Plato, yet the form is not like the idea, something apart from things; it exists only in things. Further, the relation of the supreme form to the subordinate forms is stated. The supreme form is the ground or "principle" of the other forms; they are also moved by it: it moves them, for they are moved by love to it. This highest form is interpreted according to the purest idealism: God is self-consciousness, the thought of thought. It must be remembered, at the same time, that Aristotle does not elaborate these propositions into the consistent system of idealism which they so strikingly suggest.

Aristotle's doctrine of knowledge is in harmony with these metaphysical principles. His definition of truth, as the agreement of thought with reality, indicates its fundamental principle. In cognition he distinguishes between that which is by sense and that which is by reason. By the former we know the sense-qualities; by the latter, the rational form. In both cases the knowledge consists in the presence in the mind of a form which corresponds to the form in things. "Sense-perception is that which is receptive of

of things sensible without their matter, just in the same way as wax receives the impress of the seal without the iron or gold of which it is composed."[1] It is to be remembered that sense-perception relates to the individual, not to the universal, and, therefore, cannot give us science. It is the reason that gives this supreme form of knowledge. Yet in the two kinds of knowledge there is the same relation between subject and object. "Thinking is like perception, and consists in being affected by the object of thought or in something else of this nature. Like sense then, thought or reason must be not entirely passive, but receptive of the form — that is, it must be potentially like this form but not actually identical with it; it will stand in fact toward its objects in the same relation as that in which the faculty of sense stands toward the objects of perception."[2] It seems natural to infer from such passages that Aristotle's rendering of the principle that like is known by like, is that the form in the mind is a copy of the form independent of the mind.

Yet there are also passages in Aristotle's writings in which it is stated that rational thought

[1] *De Anima*, II, 12 (Wallace's Translation).
[2] *De Anima*, III, 4.

and its object are identical. He may be supposed to mean that the universal, which is one in the many individuals, is still the same when it shows itself in the knowing mind. There is, therefore, here a tendency to pass from the doctrine that like is known by like; for likeness gives place to identity. Aristotle can here be seen to approach that modern idealism which regards thought as at once subject and object. Yet he does not go the length of such idealism.

5. There is yet another knowledge-theory belonging to the Greek period of which it is important to take account. It is found in the mysticism of Plotinus. This thinker offered some serious modifications of the doctrine of Plato and Aristotle. It seemed to him that the absolute Being could not be described as though knowledge were its essential activity. For in knowledge there is a distinction of subject and object, and the absolute, being one, cannot have this distinction applied to it. The absolute unity is the undefinable. Yet, as Plotinus proceeds to show, it gives rise to reason, which in its turn produces the ideas of things; and so there is a downward evolution till matter is finally reached. The task of the human soul is to reverse this process, and rise through its degrees till it reaches

absolute unity. In this ascent it arrives at the stage of reason which Plato and Aristotle regarded as the climax of human attainment. Here it enjoys the contemplation of the ideas; and this is good; but it is not the best. The soul passes upward to gain perfect unity with the Supreme Being. This condition is reached in ecstasy, in which the union with God is so complete that self-consciousness is obliterated, and no awareness of other existence disturbs the rapturous sense of possession by God.

It is important to notice in regard to mysticism that it looks for another kind of unity with the absolute than that which the rationalists seem to reach. It may be that the condition of ecstasy has little claim to stand for the realization of such ideals, yet the search for some other method of reaching reality than that of logical categories demands careful attention. Another peculiarity of mysticism which concerns us more at present is that its ideal of knowledge involves the absorption of the individual in the absolute. It may be urged, indeed, that mysticism is not a theory of knowledge, since it is denied by Plotinus that the highest state can be described in terms of knowledge. But we must not be misled by words. If knowledge means the way in which the human

spirit comes into contact with the absolute reality, it is not to be decided *a priori* that the ideal which it has before it is truly represented in the meaning usually associated with the term. It is necessary to keep in mind mysticism as a form of knowledge-theory.

6. The Greek era passed, and the Middle Ages came with the dominion of the Christian Church, and the insistence upon the lesson that man's supreme task in life is the salvation of his soul. The lesson was learned; the greatness of the soul was realized. At the same time, the nature that environed man was ignored. But this period also passed. Science revived, and nature was studied anew. She could no longer be ignored, and each new discovery of science served to exalt her, and display her greatness. But the lesson of the Middle Ages was not forgotten. Man came to the contemplation of nature with a deepened self-consciousness. Modern philosophy began, therefore, with two seemingly distinct entities before it, — man and nature; and no small part of its work has been devoted to the determination of their relations. The problem presented itself at first as that of the relation of mind and body. Descartes, the Occasionalists, Spinoza, and Leibnitz were taken up with questions of this kind. The

discussion touched a deeper level when Locke asked, what our ideas are, and whether they can be applied to things.

7. When such questions were asked, it seemed natural to say that our ideas reveal objects only as they appear, not as they are in themselves. There is no longer the original Greek unity of spirit and nature. Each thing is a substance which cannot disclose itself save in its effects on others; and further reflection seems to show that this is true not only of external things, but of the Ego: it is known in its appearances. One of the most characteristic theories of modern times is agnosticism.

8. Locke gives expression to agnostic views when he declares that the mind is limited to ideas, and that all its knowledge consists in the joining or separating of ideas according to their agreement or disagreement; but he does not preserve his consistency, for he very soon proceeds to speak of a knowledge in which our ideas agree with reality.

9. Hume's analysis of the contents of the mind shows that they are made up of impressions and ideas. The impressions are distinguished from the ideas by their greater strength and vividness; thus, the imagination of a scene, if compared with the actual contemplation of one, is seen to be pale and

obscure. It proves on further reflection that all the ideas are copies of impressions: in a sense they are all memories. They may be compounded in various ways and so yield the ideas of imagination, but the materials are originally derived from impressions. The great question then arises, Whence do impressions come, and what knowledge do they bring? They arise from "unknown causes." They may come from objects, or from God, or from the mind itself. What a doctrine of knowledge can do is to trace the forms which these impressions and ideas assume. Hume sets himself to prove this in tracing the history of the "philosophical ideas of relation," such as space, time, causality. He does not find that these ideas add anything new to our mental content. They are simply particular ideas considered in a certain light. The idea of time is not something different from the succession of ideas. There is a succession of ideas in us, and, looking at that in such a way that the aspect of succession is prominent, we have the idea of time. Time as an abstract idea sundered from the succession of particular ideas or impressions does not exist. Thus the study of the ideas of relation confirms the view that there is nothing in the mind save impressions and copies of impressions. The case of causality has, so far

account of the intellect is concerned, a somewhat exceptional treatment. Causality is resolved into constant conjunction in time; but this does not seem fully to explain the necessity which exists in the causal bond, and Hume says that this necessity is a new impression which arises when the constant conjunction is exhibited. Hume thus admits a special mode of origin for this mental factor. But he does not assign such an origin to other relations, nor does he attribute to this origin any special cognitive value. The necessity in causality is merely a new impression.

10. Kant offers a theory of knowledge which agrees, in important respects, with that of Hume. He also regards impressions as due to unknown causes. The thing in itself affects the sensibility, and thus produces the multiplicity of sensations. But these sensations do not reveal that thing in itself: they are only modes of the sensibility. Neither do they reveal the Ego in itself; they present only its modes. The thing in itself remains absolutely unknown.

Kant differed from Hume in his account of the "philosophical ideas of relation," or, to use his own expression, "categories." Quantity, quality, substance, cause, and the rest, are not merely particular impressions, or ideas "viewed in a certain

light." Neither are they new impressions. They are conceptions, distinct from sense-data, and owing their origin to the spontaneous activity of the mind. It might have been expected that Kant would regard these categories as representing the thing in itself, for while sensations are merely states of a conscious subject these mind-originated concepts might seem entitled to be thought of as objective. Yet Kant does not so view them. They are, as far as the thing in itself is concerned, merely subjective. They bring order and unity into the chaos of sensation; through them that sense-material is woven into the wonderful web which nature presents. Yet this web remains a mental product. Nature's laws are the creatures of the understanding. Thus categories fail as completely as sensations to give us a knowledge of things in themselves.

It is true that there are in Kant hints toward a very different theory of knowledge. He speaks of the possibility of an intelligence that, unlike ours, is not "discursive," but intuitive, and so knows things in their truth. Moreover, while intellectually we cannot reach absolute reality, we come into contact with it through our moral faculties, and the great moral principles of the universe are made known to us. Some of these suggestions

will be seen to be of great significance. Yet it remains true that the theory which Kant most explicitly formulated and most carefully elaborated is that which is agnostic in its principles.

11. It is not necessary to consider other expositions of agnosticism, for they contain little that is new. The doctrine seems, at first sight, to have assumed a much more developed form in the hands of Mr. Spencer. Yet what is most distinctive of his theory is his account of the evolution of ideas. His agnosticism does not differ from that of Hume: the manifestations of the unknowable are, he says, impressions and ideas.

12. It remains to determine the definition of knowledge which agnosticism sanctions. For in saying that knowledge is impossible it implies, obviously, a theory of the nature of knowledge. And it is also apparent that the view of knowledge is like the Greek view. The mental elements must resemble the elements to be cognized. Thoughts must be equal to things. The early Greek view and the modern agnostic view agree in their presupposition as to the nature of knowledge.[1]

13. There has, however, developed from Kant a

[1] Cf. Hume, *Treatise on Human Nature*, Bk. I, Part II, § 2; Kant, *Kritik der reinen Vernunft* (herausg. von Kehrbach), p. 222.

very remarkable theory of knowledge, which, from its wide influence at the present time, demands somewhat careful examination. Kant's agnosticism has been described. But it is to be observed that, while he teaches that the categories are merely principles of unity among sensations, and therefore unable to give us knowledge of things in themselves, he yet describes the judgments which spring from categories as knowledge: it is *a priori* knowledge, necessary and universal. This account of knowledge, as not consisting in relations between the mind and objects, but as being the development of the mind's spontaneous activity, seemed complete without any reference to an object or thing in itself. It developed into Absolute Idealism. Thus, Hegel does not allow that truth refers to the agreement of cognition with reality, but contends that it denotes the adequate realization of the Idea, as we mean by a true man one who fully realizes manhood. A similar view is represented by T. H. Green. "Knowledge," he says, "consists in the consciousness of relations, or related facts."[1] Nor is there an objective world of which these relations found in consciousness are a copy. The eternal intelligence communicates to us "in inseparable correlation, understanding and

[1] *Prolegomena to Ethics*, Bk. I, § 57.

the facts understood, experience and the experienced world."[1] Many other writers might be cited who regard the distinction between subject and object as belonging to a lower stage of the development of thought, and who describe knowledge as an activity of the mind unrelated to anything beyond itself.

14. This theory is, in part, a reaction against agnosticism, and in its zeal for the validity of knowledge, it proclaims that knowledge of an absolute kind is possible because the facts to be known are all facts of consciousness. It thus seems to meet all the demands of knowledge. And it may be that it has a truth to suggest in regard to the individual human being's knowledge of his conscious states: we shall consider later whether each of these may be at once knowing and being. The validity of the theory might be conceded also, had we to deal simply with an absolute Reason whose being was his rational activity. Yet even at this standpoint difficulties present themselves in the statements of idealists. For when it is said that the process of the universe is the knowledge or self-defining of itself by the absolute, it seems clear that there is not merely the unfolding of the Idea, but that this unfolding is

[1] *Prolegomena*, Bk. I, § 36.

guided by the purpose of having a subject which is distinct from, if also identical with, its object.

Apart from this, however, there is a further problem. It cannot be repeated too often or with too great emphasis that in the investigation into knowledge *there is first to be considered the knowledge of one individual by another.* Hegel did not do justice to the fact of individuality, and transcendentalists generally have been his partners in this error. But the experiences of individual human beings are facts; and part, at least, of the problem of knowledge is the question *how one individual consciousness is to know the experience of another.* My neighbour's actual experience as he reads the book, or enjoys the sunshine,—how am I to lay my consciousness alongside of his so that I can in any true sense know his? It may be said that we can know him by universals, for knowledge comes only by such. The assumption is great, but it need not be here criticised. If my neighbour is made up of universals, yet they are so knit together as to make him an individual with a unique experience, and when I wish to know him I wish to reproduce that particular plexus of universals. There are still, therefore, subject and object which are to meet in the fellowship of knowledge.

It may be said that when they attain this fellowship there is unity in the universal. The reasons for and against this opinion need not be stated at present. Suppose it to be true, it is to be observed that this unity is an ideal to be reached. There is a relation of subject and object, and the object determines the subject. There is not merely the spontaneous activity of an evolving Idea. There is the contrast of two individuals and the effort of one to become parallel to the other.

One cause of the triumph of the transcendentalist view, to so name it, is the success with which it has seemed to dispose of *the material world*. That world seems to be completely explained when it is resolved into sense-data and intellectual relations. We do not seem to lose anything when matter is so regarded. Thus the act by which matter is created seems to be the act by which it is known: knowing and being are in every sense identical. The success of this kind of argument, however, is due to *our complete ignorance of matter*. Matter is still an inscrutable mystery. Were our ignorance less complete, we might find that material things cannot, any more than human individuals or the lower animals, lose themselves in, or be resolved into, the mental states of an intelligence. In any case, the facts which

must determine a theory of knowledge are those of which we actually know something; and these facts are our own experiences, and the experiences of other human beings. The being of one man and the knowing of him by his neighbours are, in certain profound senses, not to be identified. We are thus brought face to face with a problem such as that which the Greeks recognized.

15. It is appropriate at this point to take account of a theory of truth which is sometimes met with. It is said that the only true knowledge that is to be attained by the mind is a system of consistent judgments. "We must seek the criterion of truth within and not without the world of consciousness. It can, then, be nothing else than the inner harmony and consistency of all thoughts and experiences."[1] Such a view naturally presents itself when the presuppositions of Locke and Kant are conceded. If knowledge consists in the combining or synthetizing of ideas, the consistency of a system of knowledge may well be the only possible test of its truth. And at all times such consistency must be admitted to have its value as a criterion. But when we are called

[1] Höffding, *Outlines of Psychology*, translated by Mary E. Lowndes, p. 219. Cf. Hume, *Treatise on Human Nature*, Bk. I, Part III, § 5.

upon to renounce all knowledge save that which is given in such a consistent system, the vital interest of knowledge is ignored. To refer to the crucial test, the man who wishes to know his neighbour does not aim merely at consistency. The goal of his effort is not that, but the reality as it lives before him.

16. We have briefly surveyed the main theories of knowledge, and they can be seen to fall into two groups. The view of knowledge of which Empedocles was taken as the representative is expressed in the formula, Like is known by like. This had the adhesion of Aristotle when he said that truth was the agreement of thought with reality. It seems also to be the presupposition of agnosticism. The other view of knowledge is that which makes it identical with its object: Aristotle in certain passages identifies the universal in the mind with that which is manifested in things; Plotinus seeks for the merging of self-consciousness in the absolute Being; Hegel regards knowledge as the unfolding of the Idea. With this group of theories may perhaps be classed that which finds the test of truth in consistency. *The truth of the first view is in its recognition of the distinction between subject and object; but in its formulation there is not any proper recognition of*

the peculiarity of self-knowledge. The second view has truth in reference to self-knowledge; it fails to recognize the problem of the knowledge which one individual has in the contemplation of another individual, and thus is fatally incomplete as a theory of knowledge.

17. This historical survey has prepared the way for a determination of the nature of knowledge. Since, in the effort to know, the mind seeks to think things as they are in themselves, and since the facts to be known by a human being are the knowing self and a world of other persons and things, knowledge may be defined as ***the presence in the mind immediately, or in copy, of that which constitutes objects.***

The full exposition and justification of this definition will be given in the chapters which follow. It may be pointed out, however, that the definition is not meant to decide at the outset how the subjective state and the object known are ultimately related. Whether the subject and object while retaining their individuality reach in knowledge an inner identity, or by their individuality are excluded from such identity, is a question left at present unanswered. Again, it is not intended to decide the question as to the knowledge which the self has of itself in each moment of its existence. It

remains to be considered whether it must become an object to itself as other things are objects to it; or is in some more intimate way knower of itself in every state of consciousness. What is affirmed in the definition is that the object, whether self or not-self, must be present to the knowing mind in copy or in some more intimate way.

It is further to be remembered that the definition presents the ideal of knowledge. It is not less the true ideal because men have failed to attain it, and in their efforts after it have used many false methods, and taken many an illusion for the prize of their search.

It is here left undetermined how far this ideal is possible of attainment. It may be that the agnostic conclusion is in important respects the correct one. Even the argument of Berkeley, that God has not given His children a strong desire for anything that He has forever put beyond their reach, is one that must be used with caution. It will have to be decided how far it is possible to reach the absolute reality. But the ideal is the ideal of knowledge. It will justify itself as such as we proceed, and it will be the true test of the methods of knowledge.

CHAPTER II

SENSATION, FEELING, AND VOLITION AS COGNITIVE FACTORS [1]

1. If the question were asked, How do we get our knowledge of objects? it is likely that most people would answer without hesitation that we get it through the senses. The panorama of nature is spread before the eye; her music comes to the soul through the ear. All that we know of her seems known by the senses: they are the "gateways of knowledge." Moreover, things are believed to exist in themselves just as the senses report them. The colours of earth, and cloud, and human face are thought to be just the same when no eye beholds them; the symphony of nature is the same whether or not there are living creatures to listen to it. Sensation is thus taken to be the great method of knowledge. "It seems evident," says Hume, "that men are carried by a natural instinct or prepossession to repose faith in their senses."

[1] While feeling and volition are not usually recognized as instruments of knowledge, the present discussion of sensation seems to afford a proper opportunity for attempting an estimate of their cognitive value.

2. "But," Hume adds, "this universal and primary opinion is soon destroyed by the slightest philosophy." And, in truth, from the beginning of philosophy, sensation has for various reasons been disparaged as a method of knowledge. Even empiricists, who seem to restrict themselves to sensation, do not regard it as yielding knowledge in the strict sense of the word; generally they are agnostics. It is only among those unaccustomed to reflection that sensation is taken for the method of knowledge.

3. The reason for rejecting sensation is not that the senses are often the victims of illusions. The objections are to the deliverances of the senses when all so-called illusions have been corrected.

Thus there is the contention of the transcendentalists that the cognitive or objective element in the mind is other than sensation. To externalize such sense-qualities as sound and colour and to make them objects is to go beyond the warrant of mere sensation. A sensation is a purely subjective somewhat. A colour by itself is not the thought of an object. To make it an object there are called into operation the categories of space and substance. At the best, sensation serves as an occasion for the exercise of reason. Just as the word tree is not the representation of the actual

tree, but may suffice to call into exercise the faculties which are necessary to the distinct figuring of the tree, so the sensation serves to call into exercise the rational faculty, and elicit not images but concepts or categories, in which alone knowledge is to be found.

Nor is it the transcendentalist alone who finds sensation wanting. The researches of the physicist seem to establish similar conclusions. The physicist finds that the objective system of things is a system of forms of energy, possibly associated with a material substrate. This system bears no similarity to the series of sensations by which its existence is indicated to us. Vibrations in the ether which are the objective counterpart of colours are yet in no way like colours; and vibrations in the air are not like sounds. The objective world is not coloured; nor is it a vocal world. There is thus a breach between the intimations of the senses and the objective world revealed by science.

A very similar objection presents itself to the view of physiological psychology. When there is studied not merely the movement in the world external to the body, but the process in the nervous system, the contrast of the physical and psychical processes is not less striking. The physiologist finds certain activities of a physical

and chemical kind carried on in the cells and fibres which constitute the nervous system. In an ordinary sense-experience some agent in the physical world starts the activities of the so-called end-organs; the action is propagated to the brain; and a sensation results. But the sensation is not a knowledge of the brain-activity. The two bear no resemblance to each other. The student of the brain confesses that, however intimately he may come to know the brain, he does not expect to diminish the disparateness between the appearance which it presents and the sensations which are due to its activities. Thus the objects to which sensations might be referred, whether they are the immediately antecedent physical processes in the brain, or the more remote objects to which the nervous activities are ultimately to be traced, show themselves to be of another quality of being than these sensations. It seems just, therefore, to conclude that as reflection progresses the cognitive value of sensation diminishes in credit.

4. These criticisms of sensation will be considered more or less directly as we proceed; and it will be seen that while they have certain obvious facts to rest on, the conclusions are of little value. They have been referred to here to account for the common disparagement of sensation. There is,

however, a characteristic of sensation which is so far a justification of these criticisms, or, at least, specifies the sense in which sensation is not cognitive. Sensation is subjective; it is a state of the subject; there is no reason for thinking that it is a state of the object at the time when, and in the form in which, this object acts as stimulus. When a man looks on his neighbour's face, he has certain sensations of colour. He does not thereby know his neighbour, for there need be nothing in his neighbour's physical or mental constitution of which that sensation is the likeness. The colour is his feeling, not his neighbour's. It is, therefore, right to reject the naïve uncritical view that things exist just as our senses report them.[1] The view is as false as the view would be that a word resembles the object for which it stands.

5. But there is a sense in which the sensibility is a truly cognitive faculty. There is a sphere in which it alone can give knowledge, — the sphere of sensation itself. Since like is known by like, sensation can be known only by sensation.

[1] Yet there is a tendency on the part of some writers to return to this uncritical view. Mach, *e.g.*, says, "The world with my Ego appeared to me as one coherent mass of sensations." (*Contributions to the Analysis of the Sensations*, translated by C. M. Williams, p. 23, note.)

First of all, it must be insisted, sensations are facts. They are such as truly as anything in the universe of thought and things. The sensation of green when I look at the grass is as much a fact as the force of gravitation. And if it is a fact, then it is legitimate to seek to know it. Again, the sensations are not exclusively, or even primarily, mere utilities in the preservation of life. The idea of evolution and of function as determined by its utility in the struggle for existence has led to the view of sensation as a means to an end beyond it. Sensation is thus regarded as a teleological instrument, and thus it is contemned. But originally it is not a means to an end. It is simply the mind's state, or activity. The rush of the winds, the flow of the water, the shining of the stars, these we describe simply as activities. They are not designed to redound to the good of wind, or sea, or star. Even so, sensations are not a set of signs invented by the mind for its convenience in discerning advantages or dangers. They are its activities, or its states. Not that the forces present in evolution fail to affect the mental life. A period of sifting comes with the struggle for existence. The fittest survive; the organisms which have certain characters survive. It is not meant that these organisms produced such characters by

design. The characters are due to the operation of laws which are regarded as blind and mechanical. The stronger survives, just as the torrent sweeps away barriers which are less strong than itself. So those minds are "selected" by nature in this period of stress which happen to possess certain sensations and certain modes of relating sensations. Now it is one set of sensations that must be developed — say, those of smell; now another — say, those of sight. The animal with the acuter faculty survives. In this manner sensations are teleological. In themselves, however, they are not teleological, any more than the clay is in itself teleological which is used to stop a hole.

Nor is sensation merely a sign for the convenience of the intellect. It is not to be thought that it indicates something to us, and may then be forgotten while that other thing is being studied. It is not merely an instrument to something beyond it; it is a fact for knowledge. Knowledge has no instruments which are merely instruments. It must fulfil in the case of all its special function; it must know them so far as they can be known. The sensation of green and other sensations must be known in themselves.

If sensations are objects of knowledge, it is evi-

dent that the likeness of idea and object which constitutes knowledge can be reached in their case, only if the knower has sensations. To know a sensation of green as a fact in his own or some other's consciousness, the knower must have the sensation of green. The blind man cannot, strictly speaking, know colours. He may have much that usually goes by the name of knowledge of them; he may associate with the term many ideas like those which other men have, and he may understand the demonstrations of optical laws as well as others. But the sensations of red and green and yellow, which are experiences of other men, and facts in the universe, are forever unknown to him. Sensations in one man are known by corresponding sensations in another who is knower; or in the same man in an act of memory. A fuller vindication of these statements will be given when the complete method of knowledge is expounded.

6. The importance of the principle laid down is great in proportion to the importance to be attached to sensation. Sensation is important inasmuch as it is a fact of consciousness. Great interest is felt in the study of matter even when matter is regarded as dead. If it is dead, much more interest should be felt in this vital element of the mind. If the physical universe is merely mechanical, Hegel is

justified when he says[1] that the meanest of man's fancies affords a better knowledge of the being of God than any object in nature; that is, the most insignificant fact of consciousness has a more divine worth than anything in nature. Again, it must be admitted by every one, transcendentalist as well as empiricist, that sensation occupies a very large place in consciousness. Our conscious experience is to a great extent made up of sensations. They come in seemingly infinite numbers, some in the noonday of attention, others in its twilight. They change from moment to moment, one picture as it is created giving way to another scene. Add to these the imaginings, the dreams by day and night, the memories, all which give sensations again, though often faded and indistinct, and it can be seen how largely life is made up of sensations. Moreover, all must agree that sensation contributes largely to the interest of life; were the sensations of taste and smell, sight and hearing, deducted from conscious experience, the residuum would be of the tamest character.

It may be also that the senses will have in the future a still higher place assigned to them. Partly because of the intellectual theories which have prevailed, and partly because of the ascetic morality

[1] *Encyclopädie*, § 248.

which is our heritage from the past, we look on them with indifference, or even suspicion. But they are the manna of our spirits, or, rather, they are the very life-pulses of our spirits. Nor does the fact that they are common justify our neglect of them. What is more common than the flowers by the wayside, or the stars in the sky? Yet to those who study them these familiar objects become worlds of increasing interest. And it is likely that the common sensations will prove to have a wealth of interest and beauty which at present is not suspected. Art has done much to honour them, but much more must be done to wean us from the abstractions which we now honour so highly, and bring us to the warmer and more vital experiences.

Whatever may be thought as to the future recognition which sensation is destined to receive, there cannot be any hesitation in saying that it has a very important place in the experience of human intelligence. Hence the importance which it has as a cognitive factor. Like is known by like. Sensation is known by sensation. This varied and changing manifold must have as its counterpart in the mind of the knower an equally varied and changing manifold.

7. It can also be seen that sensation is intimately connected with self-knowledge or self-con-

sciousness. Whether it is said that the self has sensations as its states, or that it is manifested in sensations, or that it is made up, in whole or in part, of sensations, the vital connection of sensation and self-knowledge scarcely needs demonstration. The precise nature of this connection is a question which will be taken up later.

8. The principles which have been found to hold in the case of sensation hold also in the case of feeling and will. These have usually been classed among the non-cognitive mental elements of the mind. It is true, they are admitted to have some relations to the process of knowledge. The sentiments of interest, curiosity, doubt, and so on, are described as intellectual. There are pleasures and pains of the mind. The will, too, is seen to be so closely associated with the intellectual faculties that belief is spoken of by some as a moral act. Yet feelings and volitions are not thought to be directly cognitive. A choice is not a knowledge of things; a pain or a pleasure is not a disclosure of anything save the condition of the subject.

But these mental elements are cognitive in the way in which sensation is cognitive. They are subjective even as sensation is, and thus the sphere of their cognitive application is made clear

Through them the mind knows the states of other subjects. Pain would be unintelligible to any one who had never felt pain. A volition would be unintelligible to any one who had not the power of willing. The subjective conditions, to be known, must be paralleled by similar subjective conditions in the knower. And their importance for cognition is proportionate to their importance in human life. It need not be added that they also, like sensation, must contribute to the knowledge of the self.

9. The principle that feeling and volition are cognitive holds, whatever view be adopted as to their origin and their relation to sensation. Yet it will prove instructive to look at the connection of these three factors. For the study of this connection, while it may seem to be a digression from the main argument, suggests a point of view from which the sense of the reasonableness of that argument gains an added force.

10. It can readily be seen that the feelings are closely related to the sensations. Pleasure and pain have often been regarded as aspects or attributes of sensations. Or if the hypothesis of separate nerve-endings for pain be corroborated, that feeling should be regarded as being in some of its forms a sentient experience coördinate

with sensation. There is one group of feelings whose sensational character can scarcely be questioned. The sensations which have this affective nature are those which come from the organs of breathing and digestion and other vital functions. They are not clearly defined or localized like the sensations of sight or hearing. While they are sensations, it is largely pleasure or pain which they indicate to us. Accordingly the persistent states of pleasure or pain which are called moods, are persistencies of these sensations. The larger feelings of well-being or ill-being which colour life as a whole are these elementary organic sensations. Moreover, they join themselves to the more æsthetic and intellectual sentiments. The deeper thrill which we have in the contemplation of a work of art or in the solution of a problem means that there are associated with the more refined feeling these massive sensations. It may be added that it is probably when attention is turned to these, that there can be perceived the element of truth in Wundt's theory of feeling as the reaction of the apperception upon sensations. For these sensations are not only readily evoked by all kinds of influence; they are precisely the sensations which, as we shall have occasion to see, go to make up to so great an extent the primary id-

of the self. Pleasure or pain as the "*Reactionsweise der Apperception*" means largely the pleasure or pain given in these sensations which form the core of the apperceptive consciousness.

Doubtless this question of the relation between sensation and emotion will depend for its final solution on a study of mental growth. One of the most promising theories is that of Horwicz[1] and Stanley,[2] who hold that the primal psychical fact is the pleasure-pain experience. It must, indeed, in view of such a theory, be asked whether our present feeling of pleasure and pain is not differentiated from the primal consciousness. Yet the suggestion is important that this pleasure-pain experience is the one most closely akin to the primitive consciousness; and it may be that the more ideational phenomena should be regarded as developments from this root; sensation receiving another content while it retains in most cases more or less of the pleasure-pain character.

The emotions do not call for detailed treatment in this investigation. They are blends of various mental elements, — sensations, ideas, impulses. So far as they are the "conscious reflection of instinc-

[1] *Psychologische Analysen*, Erster Theil, § 62.
[2] *Evolutionary Psychology of Feeling*, Chap. II.

tive reactions,"[1] it can be seen that they are made up of sensations or copies of sensations.

11. The will has long been regarded as a distinct faculty, and it has seemed to occupy a position of peculiar dignity. It is taken to be that faculty by which man is master of his life, and is thus made the source of moral action. This sovereign faculty gifted to a finite being is a mystery, but it is the mystery of personality. This faculty seems ultimate and irreducible; some declare that will is the ultimate reality in the universe.

Yet many attempts have been made to bring volitions into continuity with other conscious experiences. Many idealists have identified the will with reason. On the other hand, the empiricists have reduced the phenomena of will to a matter of causal connection, or, more strictly, of sequence obtaining among the sensations, ideas, pleasures, and pains of conscious experience. Much interest attaches to the efforts of some recent psychologists to show that the finer analysis applied in the present day exhibits the phenomena of the will as a series of sensations. According to them, the consciousness of a volition is the idea of an action accompanied by the feeling of effort. The idea of the action must [illegible] otherwise

[1] Marshall, *Pain, F*

the action cannot be willed, and this idea is the prefiguring of sensations like those the action will produce. The feeling of effort is also sensational; it is made up of sensations from brow, throat, and chest, the muscles of these parts being, during effort, in a state of tension.

The full consideration of these views involves a protracted discussion with which we must dispense. We are, therefore, precluded from reaching any sure conclusion as to their truth; and in any case, an attempt at a final statement would at present probably be premature. But the effort to find continuity between the will and other faculties must be commended, and is doubtless to be regarded as in a general way a prophecy of its own success.

12. Some light is thrown on the problem of the connection of the mental elements by the discoveries and suggestions of physiological psychology. This science has to do with the problem because of the correlation of psychical and physical phenomena, but the science is so incomplete that its hypotheses must not suffer too much stress. Physiology finds in the nervous system cells and fibres, and the activity of these may be regarded as a typical activity repeated in numberless forms. The cell may be stimulated by a fibre coming from

the periphery, or it may receive impulses from other cells within the brain. Amid possible individual variety there is yet general uniformity. The continuity in constitution and activity is still more clearly seen when it is remembered that all the cells are the offspring of a common parent, or stand in a still closer relation to each other. The conclusion to which this points is that, as there is one form of nervous activity and constitution, there is one form of conscious activity; that this may be described as sentiency; and that all the variety of consciousness is due to differences in the intensity and quality of that primal typical form.

13. Again, the evolutionary treatment of psychology points to the same continuity. Evolution knows no breaks in its history. Nothing foreign is grafted into the growth which it describes. It is at least probable that the soul will prove no exception to this law. From its simplest germ to its highest fruitage, it is of one tissue.

14. It is continuity that has been emphasized; the idea of continuity is very prominent in the doctrine of evolution. It must, indeed, be pointed out that continuity is not the whole truth. It does not explain the existence of anything. Change may be continuous, but in every change there is something new intr

ideas, the new theories, the new purposes that come to the soul may be shown to be continuous with the past life, to have the same "elements," but it would be as correct to say that they are new creations. The principle is true, even in the material world. A dust-heap is not simply a collection of the old identical particles which remain unchanged in spite of change of place. They are in a new relationship: it is as if a new world had been made. There might, therefore, be continuity in the soul's evolution, and yet, since new qualities and new faculties emerge without any breach of continuity, the mere fact of continuity is no warrant for conclusions as to function. It is evident that all such conclusions must be qualified by the reflection that the experience of man and nature is always changing, and that each form of it is new and, in a sense, unique.

But the fact of continuity is so far an evidence of homogeneity. Anything is not the cause of anything. Stones do not bear apples. The scenery of a landscape does not enter into the dreams of the man born blind. That which is new in the mind shows when it is examined that it is made of the material of the old.

15. Let it be repeated, it is not essential to the present investigation to settle the question of conti-

nuity. The doctrine, for instance, that like is known by like holds, however heterogeneous the mental elements may be. Yet unity and simplicity, and the presentation of evolutionary relations, are to be desired in epistemology as elsewhere. And there is a further value in these discussions. They serve to bring into clear view the fundamental fact that the mental factors are conscious and intelligible. The will, for instance, is not a blind something in man, like a hidden driving force. The will, so far as it is, or can be, spoken of intelligently, is a series, or a member of a series, of conscious phenomena. The statement that volition and emotion are cognitive thus becomes less paradoxical. They are parts of consciousness. And it is a great truth, which will become clearer as we proceed, that *knowledge is one of the primal functions of every part of conscious experience*, as assimilation is a constant function of living cells. Consciousness in all its forms reflects similar consciousnesses. Life is known by life. Moreover, all consciousness is self-knowledge.

There is a still further interest in these discussions. They prepare for a consideration of the relation between the elements already spoken of and other mental constituents. There remains one important class of mental facts, which seem to many to belong to a distinct type, removed from

all those that have been described. These are the forms, or categories, of reason. It will be necessary to study these with care, and it will be found that they have their origin in the processes of sensation and feeling. There will thus be confirmation given to the view that there is unity of type in all conscious experiences, and that they all, in an important sense, stand on the same cognitive plane.

CHAPTER III

THE CONCEPTUAL VIEW OF KNOWLEDGE

1. It was stated in the Introduction that the object aimed at by science and philosophy has been a system of universals or concepts. This statement must now be explained and verified. Its meaning, and also its correctness, will be most clearly perceived if we look at the history of the doctrine of concepts, especially its early history, and then at the form of the doctrine presented in logic.

2. The first philosopher to give prominence to the concept was Socrates. Men had used concepts before; Socrates did not invent them. When Thales said that water was the principle of all things, he was using a general concept. But Socrates was the first to call attention to the concept as the great instrument of science.

It is not to be supposed that Socrates differed from his predecessors in laying emphasis on the subjective character of thought. He did not say that thought was the supreme actuality, in con-

trast with the world of material things, nor did he say that the concept was a mental manufacture to be used in the cognition of objects. Such a contrast of subject and object was somewhat strange to the men of that time, even in their scepticism; for in their scepticism they believed that they were showing the nullity of things as well as of thoughts.

But Socrates made an advance upon earlier philosophy in saying that the concepts of things are their explanation. He assumed their objectivity, and treated them as the ground or reality of things. He would not have asked after the cause of water, or the effects of water; he would have tried to define water; and he would have shown the general or universal nature of this concept by considering the many concrete cases in which it is illustrated.

His use of this method was the beginning of a new era in the history of philosophy. He determined, Windelband remarks,[1] for all the future the essential nature of science.

It may be doubted whether Socrates was strong enough to mould the doctrines of philosophy; but the work he began was taken up by Plato and Aristotle.

3. The doctrine of Plato that the idea is the real, that it exists as an independent entity apart

[1] *Geschichte der Philosophie*, p. 75.

from individual things, and that knowledge consists in its contemplation, has been already referred to. It has also been indicated that the idea is the general concept: the idea of beauty is the one beauty in contrast with the many beautiful things; or, to use another of Plato's illustrations, the idea of bed is the one bed of which God is the maker, in contrast with the many beds produced by man's device. The concept is for Plato the presentation to the mind of the absolute, transcendent reality.

It is the natural corollary to this doctrine that Plato should regard sensation as incapable of giving us knowledge. As the concept is related to reality, so is sensation to this changing world of phenomena. Individual things in time and space are connected with the ideas, are, in some way, copies of them; but they also partake of nonentity. They belong to the stream of change, and their coming into existence is their passing into non-existence. This changing, vanishing show presents itself to the mind in sensation. Sensation is, therefore, not the medium of our knowledge of absolute reality.

Plato has drawn the outlines of a system of ideas. The relations in which the ideas stand to each other are those of the subordination and

coördination of concepts. Plato has, indeed, done little to fill in this outline. He speaks of being, justice, and a few other ideas; and he gives the good the supreme place in this system; but a further completeness he does not present. Yet he has announced the great ideal of science as an organized system of concepts.

4. Aristotle adopted the view of Plato that concepts form the content of scientific knowledge. At the same time he has modified Plato's presentation of it. The concept is not separate from things, but in things, and hence Aristotle is led sometimes to insist that, as the individual only is real, knowledge can be only of the individual. It has seemed, indeed, to some of his critics that Aristotle is here contradicting what he says of truth as found only in universals. But the contradiction ceases to be felt when it is remembered that, while only individuals exist, the universal is the essence of the individual. Knowledge is therefore of the individual, yet is, at the same time, of the universal. That which is not deducible from the universal, the varying effects, say, which an individual produces in other individuals, is accidental, and is not a matter of science.

Aristotle also teaches that there is a system of such concepts. At the same time he does not

find absolute unity in the system. There is not one supreme concept under which all others can be ranged. There is not one science, but several.

An important place in the development of knowledge is assigned to sensation. All knowledge is dependent on experience, and experience is to be traced ultimately to the senses. Without sensation there are no images, and without images there is no thought: the soul thinks the "forms in images." Yet while sensation is thus important, it does not fulfil the function of the cognitive faculty. It only serves as a matter for the higher activity of the reason which thinks in concepts. Moreover, while our knowledge starts from experience, Aristotle declares that the highest concepts are of a self-evident character, and that from such all other concepts must in an ideal system of knowledge be derived.

5. The great Greek masters determined the course which human thought was to take. Their work has never been undone. In spite of the Renaissance and Bacon they control the thinking of to-day. Aristotle may still be described as the master of them that know; the fundamental conception of knowledge is his. The name of Kant, one of the most influential and representative of modern thinkers, at once recalls the

emphasis which he laid on concepts. The data of the senses, he says, give no knowledge of themselves; they must have concepts joined to them. The concept brings light to the sense world, for sensation without it is blind. It yields unity and objectivity and order. It may still be doubtful for Kant whether this product is absolute knowledge, but, at least, it is that which constitutes science. Concepts or categories have a still higher place in the systems of Hegel and the other idealists. They are not merely regarded as principles of synthesis: they constitute the being of the Absolute; they are, in Hegel's words, God in His eternal essence. It is unnecessary to cite other illustrations of this view. The doctrine of the empiricists needs separate consideration; it will be seen, as has already been stated, that it does not differ essentially from the view described.

6. Further illustration of this view is gained when the teaching of logic is considered. And the importance of this testimony is great when the relation of logic to science and philosophy is considered. There has been not a little perplexity as to the function of logic. It used to be a subject of debate whether logic should be regarded as a science, or as an art; whether it gave the laws of thought, or was an instrument in mental train-

ing. It may seem to settle the matter to say that logic is the science of correct reasoning or thinking, and the statement is so far right. Yet it is to be remembered that logic studies fallacies. Perhaps the happiest definition of logic is that given by Professor Sigwart at the beginning of his great work: "Logic is the ethics of thought." Yet this is not to be understood quite as Sigwart understands it, as an account of the methods of correct thinking, as if logic were a method of reaching something beyond itself. An ethic does not merely give precepts which may guide to something other than themselves, but describes the ideal life itself. Logic does not merely give rules for reaching a beyond; it describes the forms which thought, at present imperfect and fallacious, must assume when its work is perfected.

The importance of the testimony of logic in the present inquiry can at once be seen. It is to logic that we ought to turn to be informed as to the ideals of science and philosophy, and we should thus know what forms a perfect knowledge is expected to take. Unfortunately this testimony is far from being so clear as it should be. Logic has failed to understand clearly its peculiar function. In hearing what it has to say, we must remember that it wavers between the function of a normative

science and that of a science which presents a certain number of actual psychological processes.

7. The first chapter of logic deals with the subject of terms. There are various forms of speech reflecting the various forms of thought, but logic restricts its attention to nouns, adjectives, and verbs. The other forms of speech are taken account of only if they are metamorphosed into the so-called categorematic forms. But this is not all; a further sifting takes place. It is the noun which is selected, and from the many kinds of noun the common noun is taken. It is the class name, which does not, like the proper noun, indicate an individual, nor, like the abstract, specify a quality. It has for its function to indicate the one in the many. So it has denotation or extension, and connotation or intension.

It cannot be said that the ordinary logic justifies this selection of the common noun. Yet it does by this sifting process point to it as the final form of logical thinking. It thus makes the concept or the intension of the term the object of thought, this being, at the same time, the content of the things "denoted."

Logic becomes more distinctly ethical in prescribing the way in which the concept is to be treated. The work of definition must be carried out; the

elements in the concept are to be distinguished and specified. Definition, however, to be satisfactory, must be preceded by division and classification. The concepts must be ranged in a certain order. They form an ascending scale of generality and stand in the relation of genus and species. The ideal of such a classification is indicated in the three scholastic rules for its direction. First, the number of the species is not to be diminished; that is, all the species contained in the universe are to be discovered. Secondly, the *summum genus*, or highest concept, is to be reached. The third rule is that the division shall not make a leap; all the intermediate species and genera are to be given. The survey of this part of logic shows that there is presented as the ideal of knowledge a system of concepts.

8. The account given of the judgment points, though by no means clearly, to the same conclusion. Light on this subject is not so much to be gained from definitions of the judgment, for these vary; it is to be found rather in the treatment to which the judgment is subjected. Judgments are divided into four classes, — universal affirmative, universal negative, particular affirmative, and particular negative. The judgments being thus classified are also said to be distinguished by the

distribution, or non-distribution, of subject and predicate. A term is distributed when it is taken in its whole extent; thus the universal affirmative, all S is P, has the subject distributed, but the predicate is undistributed, as only a part of the things it denotes are indicated. This way of presenting the judgment indicates that we are dealing with classes. The class or number of individuals indicated by the subject is contained, to keep to the illustration of the universal affirmative, in the class indicated by the predicate. The relation is made one of quantity, and this reduction of the judgment seems a deviation from the conceptual view. At the same time, this demarcation of the class depends on the presupposition of the concept which the class name indicates, and indeed the concept has already in the doctrine of the term been taken for the content of the individuals indicated by the name. We seem obliged to conclude that, while the doctrine of the judgment refers only to individuals in certain quantitative relations, it implies a reference to the concept as the basis for determining such relations, and proves to be unconsciously a reminiscence of the superordination and subordination of the world of concepts.

9. The treatment of the syllogism is similar to the treatment of the judgment. The syllogism is

an instrument to help in determining the relations of classes. In Aristotle's hands it was meant to exhibit the connection of the individual or the species with the higher, and ultimately with the highest, universal. But while, as used in the schools, it admits of this use, this is not shown to be its main function, and, even were it so employed, it would use those quantitative relations to which we have seen the judgment to be restricted. So that the syllogism, like the judgment, does not directly bear witness to the concept, though in it, as in the judgment, the concept is implied.

10. In its treatment of the judgment and the syllogism logic has degenerated into formalism: it has not been faithful to the doctrine of the concept; and it has not fulfilled in any adequate way its ethical function of presenting the ideal to be attained by knowledge. When we turn to the doctrine of induction we find a different mode of treatment. It is here that logic shows itself in most vital contact with the procedure of science; and it is here also that logic returns to the doctrine of the concept.

Inductive logic shows how the relations of phenomena are to be stated. The connection is to be given, and the statement is to be made in universal form. What is true of one case is to be presented

as the truth of all similar cases. In other words, the law of the phenomena is to be given, and the case or cases studied are regarded as exemplifications of the law. It is thus that induction determines the form of the ideal concept, for *the law is the modern scientific form of the concept.*

Why, then, is the method of induction treated apart from the question of the formation of the concept? It must be remembered that the concept which is described first by logic is the concept at the stage which is reached by unscientific thought. It is also the concept as it presented itself to Aristotle. The world is regarded by him as a world of individual things or substances. Qualities coexist in these substances: a man is wise and tall and dark. The universal concept, likewise, is a presentation of qualities that coexist; only, in the concept the coexistence is necessary. Nor does Aristotle transcend this view in his account of induction. Induction is a syllogism in the third figure and presents two qualities as coexisting because found to inhere in a common subject. Thus, to use his illustration, man, horse, and mule are gall-less; they are also long-lived; therefore, long-lived and gall-less are qualities that coexist. It is this primitive view of the world, as consisting of things, which is embodied in the

doctrine of Aristotle, and in the logic which is ultimately to be traced to him.

Modern science, however, has ceased to lay exclusive emphasis on the idea of thing. With the revival of the atomic theory in the Renaissance period, another view of the world began to gain favour. Things were resolved into atoms, and the interactions of the atoms seemed to be the facts most worthy of attention. Even the atoms came, as reflection on them continued, to have a merely hypothetical existence. That which was traced everywhere was energy. The doctrine of energy is the centre of modern science. The world is not so much a world of things; it is a world of processes. Hence the new view of induction. It is not to determine coexistence but sequence. It does not deal with qualities that are conjoined, but with processes that pass into each other; it traces the transformations of energy. The methods of induction formulated by J. S. Mill, in their contrast with those of Aristotle, show the changed point of view. They are entirely methods for discovering causes. Even when there is a coexistence of phenomena presented, the statement of them in terms of coexistence is only provisional; for the coexistence must be explained as due either to causal agency on the part of one of the phenomena, or to the fact

that both of them are necessary results of a common cause. This causal process is the most important of the ideas associated with the great scientific term law. It can thus be seen that the law which science seeks to formulate is the modern development of the concept. It can also be seen that the ordinary logic text-book presents its somewhat chaotic appearance because the older doctrine of the concept and the modern treatment of it under the head of induction are not presented in their true relation.

11. But while the doctrine of induction has been developed, logic seems on the other hand to have changed its view of the importance of the concept. It is the judgment which is often regarded by modern logicians as the universal form of rational activity. In such treatises on logic as those of Mr. Bradley and Mr. Bosanquet, the concept seems at first either to be ignored, or to be put in a very subordinate place.[1] Yet it is only in appearance that the concept is discarded. When the judgment is examined, it is found to contain a universal. When Mr. Bradley says that the judgment is the reference of an idea to

[1] Cf. Sigwart, *Logik*, Einleitung, § 1; Schuppe, *Grundriss der Erkenntniss-Theorie u. Logik*, § 66; Riehl, *Der philosophische Kriticismus*, Bd. II, Einleitung; etc.

reality, the "idea" proves to be the universal. Mr. Bosanquet speaks of the judgment as an identity in difference, but again it is clear that the "identity" is the universal: the universal, it is taught, is not present except in the judgment, but there is no judging or thinking in which it is not found; in thinking the one does not exist apart from the many, yet the many are constituted by the one.[1]

12. It has thus been shown that from a very early period in the history of philosophy the concept has been taken for the ultimate form of knowledge, and that the later philosophy has been faithful to the tradition of the earlier. The testimony of logic has also been considered, because it is the function of logic to state the ideals of knowledge; and, while the witness it bears is far from being unmistakable, it never entirely belies its Aristotelian origin; and, when it seriously faces the questions of modern science, it points clearly to the concept or the universal that is not merely extensive and quantitative, but intensive and qualitative. Finally, we have seen that, even where the judgment is said to be the concrete act of thought, the concept or universal is still regarded as its truth, or as essential to its truth.

[1] In this connection *v.* Schuppe, ***Erkenntniss-Theorie*** § 6.

CHAPTER IV

THE ORIGIN OF CONCEPTS

1. In the present age when the idea of evolution has so largely leavened the minds of men, there are few questions studied with such eagerness as those that relate to origins. This kind of inquiry is pursued with special zeal in the case of living growths. It is felt that their structure and functions are understood only as it is known how they have been made. The structure of the horse's hoof and the swift running of that animal are truly intelligible when the story of the horse's evolution is told. The language of a people is known by the modern student when he can tell the stages of its growth from birth to maturity. Who understands the English constitution that does not know English history? We are here called upon to estimate the function of concepts, and we shall understand it best when we have not only looked at the record of the use of concepts in systems of science and philosophy, but have also studied what may be called their psychological genesis.

The work is a large one, for it means little less than a history of the evolution of intellect. Only a brief summary of that history can be here attempted. It will be our aim to trace first the stages in the development of empirical concepts, and then to see how the principles reached in this investigation are to be applied to the rational concepts, or categories.

2. It is important, first of all, to observe that the concept is not necessarily different from the particular concrete image. The particular image becomes a general concept by being used universally. A name is a good illustration of this kind of concept. It is a mere particular sound, but it comes to be used of a class, and so becomes general or common. Or, let a man hear for the first time some sound, such as the hooting of an owl, the sound-image seems to be particular. But when it is said to him, all owls hoot in that way, the sound is recognized as a general or universal concept. It is not necessary that the sound-image should be changed in the mind in order to become a universal. It remains simply the original sensation or width of sensation. Any sense-quality or idea is implicitly a universal; it may, as it were, float in the mind ready to attach itself to a variety of objects. As Hegel has remarked, "this," "here," "now," are universals.

3. Again, there may be a combination of two or more qualities to form the concept. The hooting of the owl and the peculiar shape of the bird, when it is seen, may rise up together in the imagination whenever any owl is mentioned. Many general concepts are formed by thus "abstracting" from their context and combining certain qualities actually observed, and then making this abstract idea universal. It may be added, that the complex concept may be framed, not by the conjoining of distinct qualities, but by the analysis of that which presented itself at first as a unity. Let it also be observed that this abstract concept is still an image; the qualities do not lose this character, though, when brought together, they may, in a greater or smaller degree, modify each other.

4. It is also fitted to make the nature of the concept clearer, to observe that there may be framed the concept of an individual, say, Socrates. We may hesitate to call the concept general, because we restrict it in its application to one subject. Socrates has such a variety of spatial and temporal relations that the concept seems to have only one unique application; and, moreover, there is associated with it the feeling of reality, which apparently precludes its being regarded as general. Yet, on the other hand, there might be, theoretically,

many Socrateses; it was the earnest belief of some of the ancients that the cycle of the world brought back at each turn exactly the same conditions, and that Socrates in all his relations was reproduced each time in the same way. Thus all that seems unique, including the feeling of reality, becomes universal. It is scarcely necessary to point out that, when we restrict our attention to a limited number of qualities, these readily form a general concept; and we say of a man, he is a Socrates. Probably many of our class concepts wear the features of some individual. The term tree calls up the tree we are wont to see from the window; dog is the household guardian.

5. There is another form that appears in the development of the concept. There is the concept which does not resemble any particular image known to experience. The concept man may be unlike Socrates or Plato or any other; the tree may not answer to the oak or maple or any other actual species.

In the case of children, the first images may be supposed to be vague. The child calls all men Papa, probably because it does not notice the differences in the visual images they furnish. Afterward, with developing perceptive power, it notes the peculiarities of individuals. Yet the original

vague image is not lost; it retains a relative independence as the concept man.

Accompanying this process and tending to supersede it is another, by which the observation of a multitude of individuals results in the formation of a concept. Many trees, for instance, have been seen — the oak, the ash, the maple, the sapling, and the tree of a hundred years. When a number of individuals are thus observed, each individual may contribute to the general concept, and the concept may thus be a resultant that is not to be identified with any of the individuals that have produced it. Mr. Galton has furnished an excellent illustration of the forming of such concepts by the process of taking composite photographs. As, in the taking of the composite photograph, the various individual photographs are exposed for a certain time, so that the resultant image has in bold and strong outline those features which are most nearly alike in all, while the other features are vague and shadowy; so, in the observation of the members of a class, the sensitive plate of the imagination receives the strongest impression from those parts in which they all agree, while the other parts show more or less nebulous.[1] The illustration helps us to understand how a large number of the concepts indicated by

[1] Cf. Spinoza, *Ethica*, Par. II, Propos. 40, schol.

the common noun are possible. The concept in such cases is not merely a quality as given immediately in sense-experience; nor is it the complex idea of an individual which has also been given in experience; it is a quality, or group of qualities, differing from the original qualities, and present as something relatively new. Thus the term word may call up to us a dim image of a word in a line on a printed page, so dim that no letters are clearly discernible in it. The term tree may call up an image of a trunk with branches leaving it, the rest of the complete image being vague or absent. This fragmentary image is not necessarily the counterpart of any tree actually seen. Let it be carefully noted in this case also that the product is still an image; though shadowy and indeterminate, it does not differ essentially from more definite images.

6. The concept being formed in these ways, there arises the important question of its relation to individual things. It is regarded as the essence of the individuals. It is that which constitutes them members of the class or species. They are thought by means of it. This is seen in the ordinary judgments in which a common noun is used. To say that Socrates is a man means that the immediate mental presentation, Socrates, is interpreted as having for its constituent that which is indicated by the concept man. Socrates, as subject, does

not include the man of the predicate; this would be in a sense true even were the judgment meant to be merely the unfolding of what is contained in the subject. When the judgment is not explicative, it is clearly an interpretation of that which is presented in the subject; that is, the concept given in the predicate interprets the subject by representing its true essential being.

Now, the concept, like the sensation, has in primitive thinking an objective character. It is a real thing. This is the stage at which are to be found Plato and Aristotle, and their ancient and modern followers. The concept gotten from particulars is treated as an objective reality. But a peculiar problem is herein involved. How is the concept, which is a unity, related to the many individuals to which it is applied? Socrates is a man, but Plato also is a man, and Aristotle is a man: how is the universal, man, related to these three individuals? For our ordinary thinking the solution is found in a numerical multiplication of the essence. In three men there are three essences; the essences, though exactly alike, are numerically distinct. Not that in our every-day thinking we recognize this process with any distinctness. But should an analysis of our mental content be made it would be found that this idea is present, though in a dim form.

With the advance of reflection this view changed. As attention was turned to the general concept by the Greek thinkers, the doctrine of its reality and individuality was explicitly formulated. It was the natural outcome of this kind of reflection to conclude that the concept is the one in the many. This doctrine of the one in the many has played such an important part in the higher development of the doctrine of concepts that it is important to have its precise significance realized. The universal is still kept distinct from the particular. The universal is, however vague, an individual image or idea. The particular is another individual image. Yet the particular is referred to the universal for its ground or explanation, as when we say, Socrates is a man. It was thus natural that the particular should come to be thought of as that which the universal has made, or that into which the universal is changed. Since the individual is the metamorphosed universal, it might be supposed that it would for the mind supersede the universal. Yet the two are kept distinct. There is one important reason for their remaining distinct. The process traced out in the case of one particular is carried through for a multitude of particular cases. The universal is metamorphosed into the many. At the same time, as a concept or

universal, it remains one. There thus emerges the doctrine of the one in the many, and yet distinct from them. It has changed into them, for they are the realities, yet it has still an independent reality, for when we would know them we must look on it, not merely as their potent producer in the past, but as their present essence.

7. With the advance of science other changes take place which concern the content of the concept. These have been already referred to, and need only be mentioned. The general concept is found to have been in many cases formed hastily, and to be vague in character, and care must be taken to define precisely the qualities which truly enter into it. There is a further and still more profound change. The original concept made of a combination of sense-qualities is seemingly discarded. The tree is not a subject coloured and fragrant; the tree is a plexus of forces, or, otherwise expressed, it is a system of laws.

8. Along with these developments of the concept, and yet independently of them, there is proceeding a further refinement of thought, which, indeed, is the natural result of the process of abstraction. Thought, like other living activities, tends to be economical. In using a number of concepts it retains just so much of their content as is necessary

to the proper conducting of its processes. For quickness, and for the saving of energy, it must thus limit itself. The word associated with the concept is often all that we have in mind. When such sentences as, Virtue is the cause of happiness, Logic is a useful study, are read to us, there is probably often nothing in consciousness beyond the words. Or at most there is some fragment of an image or feeling associated with them; by the term virtue there may be roused the first pulses of a feeling of reverence; with happiness may go a slight wave of pleasant feeling. In the reading of a paragraph it often happens that all that is in the mind is practically a series of words. Language is the algebra of thought, as Berkeley remarked; words are counters or symbols which take the place of the original concepts.

9. It can now be seen that *the concept, in whatever form we find it, is the creature of the imagination.* The concept, whether it is a simple quality, or a group of qualities, or a composite photograph, is still an image; or, again, if it is represented by a mere fragment of an image, or by a symbol associated with it, such as a word or name, the fragment or symbol is still an image. It will be shown later that the idea of force is also a sensory image.

10. We come now to the group of concepts co

monly known as categories. They have been thought to have a peculiar dignity and value in the cognitive realm. Hegel speaks of the categories as a Pantheon of god-like figures. They have played such an important part in the history of thought that they demand a separate, careful investigation.

11. It has been a common doctrine that the faculty which uses categories is not the imagination, but the reason. This doctrine has been much emphasized in modern times by Hegel and his school. The category is said to be not *Vorstellung* but *Begriff;* or, if in the evolution of thought it appears at first as a *Vorstellung*, its destiny is to be transformed into a *Begriff*.

The doctrine that thoughts are not images has certain facts to appeal to. The categories seem to have no kinship with the familiar images of the five senses. They mingle with these images; they are "mediated" by means of images; but they only stand out in greater distinctness, the more closely they are brought into comparison with images. When a man understands something, there seems to be nothing of the *Vorstellung* about that which is in a special sense his thought.

But it is not to be inferred straightway that our categories do not arise from sensory experience. A category may not be like a shout, or the picture of

a cow, or the smell of roast beef; but it is not thereby proved that it belongs to another than the sensory realm. The sensory factors become, in the process of abstraction, attenuated and shadowy. Besides, the category may originate, not in the "five" senses, but in obscure visceral or muscular feelings. A more careful psychological analysis shows that the distinction drawn by the transcendentalist between sense and reason must be annulled, and that the categories are to be regarded as products of sensory experiences. *The category and the empirical concept belong to one type.*

12. These statements can be established only by a study of the particular categories. While Kant recognized twelve categories, Hegel has given account of a much larger number, and Professor James says the feelings of relation are numberless. The examination of them might thus seem to be a great, or even an endless, labor. Yet, doubtless the categories may be reduced to a definite number of types; and it may suffice here to consider some of those that are more common or important.

13. We shall begin, as Kant did, with space, though, indeed, he did not rank space with the categories proper. It is important to notice, first of all, the presence of the space idea in all our mental life. The experiences with which it has

been thought to be chiefly connected are the sensations of sight, touch, and movement. Yet it comes through all the senses,[1] and all the mental experiences. It may be said that, of course, this is so, because, as Kant taught, space is the form of sense. Yet it is not merely the form of sense. It is one of the characteristics of all our mental activity that we put the contents of consciousness side by side. We cannot construct an abstract argument, or put the most intellectual conceptions before us in any other way. They cannot be conceived as existing in any other way. Not only must we think of two coloured surfaces as existing outside of each other; when we think of time, or of substance and property, or of cause and effect, or of any other abstract category, we have still the spatial form. The points that hold the attention are arranged in space.

For illustration, let time be considered. Time is not space, yet when we think of time we find that the idea is largely spatial. Even Kant speaks of time as a line, or as possessed of two dimensions; and there is no valid reason for denying it the tri-dimensional character. The past years reach into the distance, like the objects of a landscape. Shakespeare speaks of the "dark backward and

[1] Cf. James, *Psychology*, Vol. II, p. 134.

abysm of time," showing in what form time presented itself to one for whom it was such an overpowering reality. It is true that there is more than the spatial element in the idea of time; there is the appearance of the figures ranged in past time, as they stand ghostly and unreal: there is associated with the past the sense of loss; the future also has its peculiar unreality. These elements are all fused in the idea of time; yet none the less the distinction of moments in time is spatial. What is true of time is true of other intellectual conceptions: wherever there is the distinction of elements, the multiplicity presents itself as a position of one thing beside another. The claim that thought is not spatial is probably due to the difficulty of giving its constituents a place in the visible or tangible area.

This universality of space is not only a fact which it is interesting to notice: the consideration of it helps to an understanding of the significance of the space-concept. When there is distinction of mental contents, there is extensity. This distinction is facilitated by the variety which characterizes our sensory experiences. Yet if we should make the theoretical supposition of an entirely homogeneous width of sensation, we should even in such a case find that the distinction exists.

It is an important question in the investigation of the genesis of the space-concept, whether the distinction of mental contents is primary and necessary in sentient experience. Hume believed that the *minimum visibile* has no magnitude; and were this admitted, it might further be admitted that there may be orders of being for which such a form of perception is normal. But whether the human *minimum visibile* is of this non-spatial character is more than doubtful. And the possibility of such a non-spatial perception in other intelligences is, to say the least, purely theoretical.

Such speculations have no reference to the actual experience of man after birth. By the conditions of that experience there is not possible for it such a singleness of sensation. From birth man is exposed to a multitude of simultaneous impressions. It is, at the same time, difficult to realize the meaning of extensity or manifoldness in the first experiences when there are no developed ideas of up and down, right and left. It is also to be remembered that the first images are of a very blurred character: the finer analysis of them is the work of the years to come.

Let it be granted that human experience has from the beginning this character of extensity or manifoldness, it is to be noticed that we have not

yet reached the abstract idea of space or quantity. In much of the ordinary thinking, even of adults, there is present to the mind simply a manifold of sensations without any further space-idea. Hegel finds the qualitative manifold to be different from, and logically prior to, the concept of quantity. It is this qualitative manifold which is given in the beginning of human experience. Further, though there is this distinction of the constituents of the manifold, the distinction is not due to the presence in the mind of the categories of likeness and difference. We cannot attribute these categories to the infant, or to the lower forms of animal intelligence. There are present in experience two or more sensations of different qualities, but the mind, though having different feelings, does not react to them with the idea of difference.

How is the idea of space derived from this qualitative manifold? It arises because there are changes in the content of the sensuous area. To refer to the visual experiences, one variegated scene or manifold gives place to another. It is now the furniture of the room that is seen, now the landscape, now a human face. Of these various fillings of the visual field there is formed a kind of composite image, or abstract idea. The particular contents cancel each other, and disappear.

There is not, indeed, an abolition of all quality, but the quality becomes homogeneous, and any particular quality is indifferent. There is thus left in the mind a variety that is no variety, but simply a multiplicity that is a repetition of the sense-quality. This featureless yet manifold, quality is quantity or space.

In a fuller study of the origin of this conception, great attention should be given to the ideas of movement, for these have probably much to do with the final form of the idea of space. The tactile sense-experiences should also be considered. In both cases there is a process analogous to that which we have traced in the visual experiences. There is a multiplicity of sensations, which, either actually or in representation, are given together. The resultant of a series of mental fillings of this kind is the pure manifoldness of space.

The analysis of the idea of space confirms this account of its origin. Space is multiplicity of a perfectly homogeneous quality. It has this peculiar character inasmuch as it is the residuum of a variety of qualities.

It can now be seen why space is the form of all experience, or the form of the world. It is derived or abstracted from universal experience. It is the shadow of the multiplicity in experience.

It can also be seen how far Kant is right in denying that space is of the nature of a concept. It does not appear as one general space embodied in many particular spaces, as the concept tree is embodied in many particular trees, but as one space that contains the many spaces. Nevertheless, it is a concept, or resultant image. It is derived from a series of qualitative manifolds. There may be many such spaces which are not united into one space. It is the work of reflection to show that these are parts of one space.

It is, therefore, necessary to regard the space-concept as developing like other empirical concepts. It is the resultant image of a multitude of perceptions in which a variety of sensory content has been furnished. Whether or not the qualitative manifold is the necessary form of the original psychical state, it is the form of all post-natal experience of the human being. And the various manifolds give rise to the idea of space proper in the ordinary empirical fashion.

14. After what has been already said of time, in the discussion of space, it is unnecessary to take much time to demonstrate that it is an empirical concept. It may, however, be pointed out that not only are our ideas ranged in space with feelings of reality or unreality associated

with them; the comparison of a thing as real, with itself as distant and unreal, evokes a peculiar feeling, which is the distinctively new element in the time-feeling.

15. The category of being or reality is one of our most elementary categories. It is also one of the most universal: it is thought to hold of the universe and all that it contains. It is one of the interesting suggestions of recent psychology[1] that the category of reality is derived from the sense of touch. A thing is real when we touch it. Other senses may deceive us, but we are assured of the reality of things when they appeal to the sense of pressure. It is the evidence of this sense that the doubting Thomas declares conclusive when he demands proof that the Lord is risen. It is noteworthy that Berkeley, in speaking of the relation of sight and touch, always goes on the assumption that touch is the reality sense. The tangible qualities, along with the spatial form, are denominated the "primary" qualities of bodies. The common refutation of idealism has been an appeal to the sense of touch.

It is true that the other sensations not only

[1] *American Journal of Psychology*, Vol. IV, p. 429; James' *Psychology*, Vol. II, p. 305.

refer us to this class of sensations; they themselves may be designated real, and the same epithet may be applied to all the other ideas of the mind. Yet even in such cases the reality-idea remains the touch-idea. There is always the sense of solidity or resistance when the category shapes itself into a definite thought.

Touch has this preëminence among the senses for reasons of utility. A colour or a sound is not directly of vital moment, but that which touches the body is of immediate practical concern. Hence those sensations are important as they are interpreted in terms of touch. The category of being, though derived from this sense, is not any particular touch-feeling. A great variety of touches have been experienced, and this category is their resultant or composite image. It is thus one of the ideas of the understanding. It becomes, through use, to some extent unlike the original feelings from which it is derived; it is as when a fragment of rock is broken from its original resting-place and worn into a smooth pebble, so that it is hard to tell its starting-point. But as the pebble tells the secret of its history to a closer observation, so this category is seen to be derived from certain definite sense-experiences.

There may be need at this point to repeat that

not only do conceptual images become attenuated; there may be in the mind nothing beyond their names. The category of reality and the other categories are often so represented. But we are not on this account justified in supposing that they are thoughts which have nothing sensory about them.

There is one respect in which the category of being differs from that of space to which it is of importance to call attention. Space is derived from universal experience; hence, it is by nature absolutely universal in its application. Being or reality has an artificial universality: it is derived from a small part of experience, and then it is *made* universal by being attached to all experience.

16. The categories of being, including space and time, are, as Hegel has taught, primary and elementary, and are added to, or transcended, as the mind advances in the intellectual construction of the world. So long as the bare idea of reality is adhered to, there is not necessarily any distinction of subject and object. The sensation of hardness is real in the sense that to it other sensations are referred; but it is not the reality of distinct, self-enclosed, isolated individuality. Just as little is it thought of as merely subjective. It belongs

to a stage of thought at which distinctions of subject and object have not necessarily made their appearance. A new advance is made when the world shapes itself before the mind into a system of units, so that a man distinguishes himself from other individual things around him. The defining of the spatial limits of bodies, which comes with observation of their movements, involves the transition to this view. It does not, however, concern us here to trace all the steps by which this breaking up into units takes place; it is the result of the process that is important. There is an association of the group of feelings which may be called the inner feelings of the body with the body's visible and tangible reality; and the man who has accomplished this association in the case of his own body, associates with other bodies psychic experiences similar to his own. It is to this ejection of the inner feelings that a number of categories are to be traced. It is true that the categories of being illustrate this process of externalizing the feelings. Yet the process takes a new aspect when man begins to regard the world as consisting of feelings like those which he also thinks as peculiarly his own inner life. The categories which spring from this source are those which Hegel has grouped under the head of es-

sence: they are such as essence, similarity, substance, and causality.

17. The category of essence[1] reveals this new mode of thinking, though still in a somewhat obscure way. The essence of a thing means certain qualities which make the thing, and are enumerated when we give a definition. As Locke says, it is the being of anything whereby it is what it is. Yet since the judgment as to what is essential varies, it may be said that the essence of a thing consists of those qualities on which the attention has been centred. This concentration upon them is due to various reasons: the qualities are attended to which are permanent, and so force themselves upon us, as when we think of the stem and branches of a tree as essential, while the leaves which come and go are non-essential; or they may be qualities associated with some utility: the power to cut is essential to a knife, whereas the colour of the knife-handle is non-essential. The essence, it can be seen, is, so far, one with the general concept, but there is also something added to the concept. This new factor is the feeling of strain that we have when we hold on to anything. It is a feeling of, or connected with,

[1] The derivation of this category is to be taken as somewhat tentative.

prolonged muscular strain. We project this feeling into the qualities which have permanence. This projection is similar to that by which we objectify sensations of all kinds: when certain qualities exhibit tenacity, we associate with them the feelings which we have when we show tenacity.

Essence has thus an empirical origin; yet the idea is a resultant of many particular images, and has thus become a category of the understanding.

18. Another category which must be referred to here is similarity. Its consideration is the more important because, even by empiricists, it is regarded as given in some form in the mind's first intuitions. There is truth in the view that it is given early in experience, if it is meant that one sensation is not another sensation. To have the sensations of red and green is not, however, to know that they are alike, or that they are different. The transcendentalist is justified in pointing out that a category is being joined to sense-experience when we make such predications. How then does the category arise? It has been contended that to see the similarity of objects is to see their partial identity. Yet this contention must appeal rather to the metaphysics of similarity than to its psychology. When we look at two objects, say,

two windows, we perceive their likeness, but we cannot be said to perceive any identity in them. Each keeps to every detail its individuality. The likeness is a third idea, blending, indeed, with them, and forming a unity with them, yet coming from its own peculiar source. That the idea is not any constituent of the two objects present to the mind is further shown by the fact that it is practically the same idea when applied to windows, or apples, or faces. What then is its nature? It seems to consist in certain bodily or visceral feelings which are aroused when there are two or more objects which affect the mind in the same way. It is not, indeed, meant that this feeling is gained by a perception of the sameness, any more than the peculiar effect of a repetition of blows is due to a perception of the similarity of the blows. The sameness is not perceived as such at first. It is a new feeling, induced by a repetition of conscious experiences, or a simultaneity of certain experiences. These are not in themselves recognized as like or unlike; but they are followed by this feeling. The feeling is, after the usual fashion, objectified, and made a link between the two or more things with which it is associated, and then by virtue of it they are felt to be "like." It seems to consist, as we have said, in certain bodily sen-

sations; these are obscure, and difficult to analyze, as the internal bodily sensations usually are. It is gradually refined and sublimated, and at last the idea is, in many instances of its use, scarcely to be distinguished from the word.

19. This ejection of internal bodily feelings, which we have found so obscurely intimated in the ideas of essence and similarity, is unmistakable in the categories of substance and causality.

The substance of a thing is the support or substratum of its qualities. The qualities change their form; they have modes or accidents, whereas the substance is the permanent one. Locke says that this substratum is "something, we know not what," and this agnostic view has been common. Yet it is soon evident that substance is not entirely unknown. The idea of it is the idea of something; and it is of something contained in the object. Further light is thrown upon it when it is considered what stands to each man for his own substance; it is found that the ideas of substance and self coincide.

What are the self-feelings? Self-consciousness has often been regarded as that attribute of man in which he shows likest God. It should be noticed, however, that the self-consciousness which has so high a dignity is an ideal self-consciousness. It

is thought of as belonging to the man who knows the self as identical with the source of all that is, and yet as infinitely superior to all that is merely natural. Self-consciousness is thus a large part of philosophy. It is doubtful whether the perfectly developed self would view itself quite as such theories suppose. In any case, the ordinary consciousness of self is of a different nature. When the individual first distinguishes himself from other things, it is the spatial distinctness of his body which is present to the mind. The self is the body; self-consciousness is primarily what has been called "somatic consciousness." In this somatic consciousness the chief importance attaches to the feelings of the trunk. The muscular feelings of this part of the body; closely associated with these, the extended, peripheral touch feelings; further, the feelings derived from the organs of breathing, digestion, and circulation, — all these give filling to the idea of the self. Characteristic of these feelings is their relative constancy. They abide with us. Ideas come and go; nothing is more changeable than the ideational life. Arms and legs are now in motion and now at rest. But many of the trunk feelings, if not without variableness, are much more permanent; and this constancy fits them to represent the self. They

are further fitted for this function by their emotional quality. They give the greatest sense of well-being or ill-being; they determine the moods of melancholy and happiness; they add thrill and reverberation to other finer feelings of pleasure and pain. It should be added that, even in such strongly contrasted states as pleasure and pain, there is much that remains constant. The parts affected are the same; they may even be similarly affected. This brings us back to what is in some respects the most important qualification of these feelings for yielding the idea of the self: they have a well-marked local character. Usually, indeed, they are said to be vague, and badly localized; and, in one sense, the statement is correct: an internal pain may be difficult to locate with definiteness. But these feelings are local, inasmuch as they are recognized as belonging to the trunk. They are body-filling, and at the same time body-limited. The ideas of imagination have a much less definite location; they seem to be where the things thought of are, and they thus may be anywhere, save for the muscular sensations connected with them. The trunk feelings, on the other hand, are distinctly subjective.

The feelings which make up the somatic consciousness are vague. The idea of the self is not

these feelings in their immediate form and quality. It is the resultant of the feelings experienced at various times. It is a composite photograph of them. Further, the various feelings are combined in a massive continuum. They blend in an undifferentiated mass. This is the idea of the self which follows a man like his shadow. To this other features may be added. One of the most strongly marked is the faculty of volition. The predominant interests of the individual, scientific, æsthetic, or religious, also go to complete the idea.

But while each individual tends to gain a more specialized conception of his self, a contrary process takes place in the development of animism. The world, which is regarded as a world of living souls, begins to show to a closer inspection the diversities of classes and individuals. There are differences in form and size, and, as some do not speak or move, there is manifest diversity in feelings of activity, and in response to stimuli. Therefore only certain elements in the self can be rightly projected outwards. Those must be selected which are common to all the selves. If the intellectual has been recognized at all, it must be pronounced non-essential. The muscular feelings, so far as connected with volition, are probably an uncertain fringe around the idea of the self. There is

left, as the common element in all individuals, the blend of vague, massive, body-filling sensations. This residuum, this permanent identical core of individual things, is substance. It is the same substance for material as for living things. Even the later division of substances into extended and spiritual does not affect the generic concept.

It is now possible to see the meaning of the support which substance renders to attributes. The phenomenal life, made up of quickly changing sensations and ideas, seems to rest on this substrate of the abiding self. We can also see the explanation of the agnosticism which tends to adhere to the conception. The feelings which enter into it are massive and vague, little comparable to the finely differentiated sensations of sight and hearing. It is the vagueness of these organic sensations that is the original justification of the common doctrine of a mysterious, unintelligible background of phenomena.

20. Still clearer is the empirical orgin of the category of causality. This is one of our most common categories; it is also one of the great concepts of science. Its origin has been often discussed. The study of it led Kant to his theory of the spontaneity of the understanding in the production of such concepts. Yet, in spite of Kant,

it must be averred that the investigation of it has shown that its origin is to be sought in our common sense-experience.

Reid,[1] when expounding the notion of active power, makes these sagacious remarks: "The conception of an efficient cause may very probably be derived from the experience we have had in very early life of our own power to produce certain effects. . . . If it be so that the conception of an efficient cause enters into the mind only from the early conviction we have that we are the efficients of our own voluntary actions (which I think is most probable), the notion of efficiency will be reduced to this, That it is a relation between the cause and the effect similar to that which is between us and our voluntary actions. This is surely the most distinct notion, and, I think, the only notion we can form of real efficiency." In other words, we associate with our own bodily movements feelings of effort; we then associate with the movements of external things similar feelings of effort: the thing which we call a cause is regarded as such because it makes, we think, an effort such as we make when we will to do anything.

In view of such an analysis it cannot be said

[1] Essay on *Active Power in General*, Chap. V.

that the category of causality is a product of the pure understanding. It is derived empirically from the phenomena of volitional activity. The truth of this is apparent if we accept the view that the feeling of effort is a complex of peripheral sensations. And the case is not much altered, if the "feeling of innervation" be insisted on. If such a feeling exist, distinct from peripheral sensations, is it not simply, as Hume would say, a "new impression"? Or, to speak in physiological terms, it betokens, like sensations, the metabolism going on in the brain cells. We may conclude, therefore, that it is a phenomenon, if it exists at all, not essentially different from those "feelings" we call sensations.

21. This derivation of causality is all the more important, as it indicates at the same time the origin of the conceptions of energy and force, which have so large a place in modern science. Energy seems to be the modern substitute for causality; when science traces the causes of things, it traces the transformations of energy. Yet it has the same essential content. The word energy suggests even more directly than cause the ancestral source of both conceptions: it still recalls the feeling of effort and strain. Energy differs from causality chiefly in the doctrine which has

been developed concerning it; while causality is intermittent, as our feelings of effort are, the energy of the world has, we are taught, a certain persistence and constancy. It is not necessary here to consider the distinction between energy and force.

22. This category of causality has brought us in sight of other categories, which are derived even more directly than it from observation of the phenomena of the mind and will.

23. One of the chief categories in this class is that of teleology. It is one that has received very great prominence in recent philosophy. It comes originally from observation of human, and, to some extent, animal experience. Man thinks of an end and uses means to its realization: he wishes a harvest, and he ploughs his field, and sows the seed, and rises night and day. We have here simply a special form of representation of a causal series. The man's past experience has associated harvest with seed-time as effect with cause. Now when he thinks of the effect, he thinks of its cause, or of the chain of causes, and he thinks of them in their actual order. If the ideas of his own contributions to this series become, for any reason, vivid enough, they are translated into action; for as we shall have occasion to see, it is the nature of ideas of action thus to translate themselves.

There is no material difference between such cases and those in which an end is sought of a kind that has never been present to man's actual observation; an inventor tries, for instance, to make a flying-machine. Even in such cases the separation from experience is not absolute. The new idea is due to the plastic power of the imagination as it works on old material.

It is from observation of such processes that the idea of teleology, or purpose, or final cause, is derived.

The idea seems to have a special significance when an immanent teleology is spoken of. A tree develops, or humanity develops, or the universe develops: through the life of the individual, and through the ages a purpose runs; but the purpose is not in some mind external to the process; the end which is reached is said to be present ideally throughout the whole movement; or, the teleology is immanent. The peculiarity of the idea when so rendered is obviously that the end or purpose is no longer dependent on a thinker, but is regarded as independent, and as possessed of a causal efficiency of its own. We have thus the rendering of the teleological concept which is so prominent in many systems of idealism from the time of Aristotle onward. Its empirical origin does not demand further demonstration.

24. The meanings attaching to the word self have been referred to in the analysis of the category of substance. The concept reason is gained from empirical observation of that group of mental phenomena to which the name refers. The concept of will comes from the consciousness of effort, and also from the consciousness of choice, or decision, or what is called the *fiat* of the will. This fiat seems to indicate the sense of an overt action, as it is vividly contrasted with the incipient or ideational acting of a state of indecision. Whatever its meaning, this fiat lends a distinct colour to the idea of the will. Yet there is nothing in it to suggest that volition, though Hegel puts it in his list of categories, is a thought of other than empirical origin.

25. Our concepts, categories, universals, all belong to one type; they grow in one way. They are all alike the offspring of experience. Some of the so-called categories seem to have a universality which is inexplicable on this basis, but they get their universality just as the ordinary empirical concept gets its sphere. Any quality, as we have seen, is, or may be, a universal, and becomes such by being used universally. And it is in this way that the categories have gained what may be called their numerical universality.

They are all derived from fragments of experience, with, perhaps, the exception of space, which represents something common to all our human experience. Then they are given dominion over a much wider sphere. Causality, for instance, is taken from a bit of experience even as the concept tree is. Tree is not applied except to the objects from which it is derived. Causality has a much wider range than the phenomena which are its source, because we think our own actions as mediated through the inward feeling of energy, and, further, because, being inveterately animistic in our interpretation of phenomena, we interpret all changes in terms of our own actions. The more constant and prominent ideas and feelings are transferred, so far as is possible, to all other objects; and thus the categories which represent them gain their widely extended application.

26. There is a possible criticism of this derivation of the categories which should be considered. It may be said that the account given of them presents them when they have come to recognition as the result of reflection; yet this is not their creation: they are implicit in the earlier experience, and determine its form; and thus seem to emerge from that which really owes its shape to them. Thus, space was implicit in what has been called the quali-

tative manifold, for it was by virtue of the presence of this form that it was a manifold. It is causality that determines the sequence of phenomena; and its emergence in connection with the phenomena of volition merely indicates that these are the facts which bring it before the reflective consciousness. In answer to such criticisms it must be pointed out that to say that the categories are "implicitly" or "potentially" in the earlier consciousness, is to use expressions which are apt to cover a very doubtful metaphysical theory. When a phenomenon in a series is said to be implicitly or potentially in the earlier members of that series, all that the statement is entitled to mean is that the phenomenon belongs to the series, and occurs at a certain determinate place in it. It is further to be observed that it is necessary, if the presuppositions of such criticism be adopted, to hold that the categories, which, after all, are known to us as facts of consciousness, are at the early stages of experience at once absent from consciousness, and yet somehow present as potent factors in it. But even if it should be possible to harmonize these seeming contradictions, the fatal fact remains that the content of the categories is empirical or sensational. They presuppose experience; they are not presupposed by it. The form of space is

made of nothing but sensations; the categories of substance and cause contain nothing but sensory elements; even the categories of teleology and reason are of the same material. The concepts have not, it may be repeated, the vividness of sensation; they are fainter and more evanescent; yet nevertheless they are sensory. The *Begriff* is a dried and faded *Vorstellung*.

27. It is thus impossible to subscribe to the doctrine of Kant, that the categories are not derived from the sensibility, but are *a priori* in the mind, and are to be attributed to the spontaneity of the understanding. We have seen that this Melchisedek origin is not to be attributed to them. Kant's suggestion, that the sensibility and the understanding may have a common, though to us unknown, root, falls short of the truth which psychology is revealing to us. Rather must we say that the sensibility is the root, and the categories are growths from that root. Yet Kant's doctrine of the spontaneity of the understanding is important in showing the nature of growth. When considering the continuity of the mental life, we saw that the explanation of anything is not given in the history of that thing; even in the dust-heap formed by the wayside we have not merely a recombination of old particles; we

find a manifestation of being that is original and unique. And in the growth of mind, in the recombination and modification of sensory elements, there is not merely the old. The resultant concept is other than the images from which it comes. There is, in truth, a spontaneity of the understanding. The life of the mind, like all other life, does not repeat itself, but ever assumes new forms. Yet let the bearing of this principle be recognized. It may be true that the categories are new mental entities; *but so is every work of the imagination, every fancy of an idle hour.* What Kant showed to be true for a few mental entities, is true for unnumbered others that are not of the order of the categories. The object of the above discussion has not been to call in question the fact of the newness of certain facts in the mental life; it has rather been to show that this newness is not characteristic of these alone, but is similar to that which we find in the familiar processes of the fancy and imagination, and also that it can be construed in entire consistency with the doctrine that the mental life is continuous from the simplest sensation-germ to the highest intellectual attainment.

28. There remains to be considered the Kantian proof that the categories are *a priori* in the mind.

It is meant to show that they are necessary to experience. Thought, according to Kant, is synthesis or conjunction, and as the data of sense do not in themselves present a unity, the mind must supply it by its spontaneous activity. This unifying activity is manifested in the application of the categories to sense-data.

This view of sensations as discrete units is one that is natural enough at all times, and had been specially developed in the writings of the British philosophers. So Kant regards our sense-intuitions as made up of a multitude of sensations. But this means that the idea of multiplicity gained from the sensory experience by the conceptual process is taken to describe that original experience from which it is differentiated. We shall see the falsity of this method in the next chapter. There is no real ground for Kant's view; a sensory experience is not a multiplicity of discrete points. Moreover, synthesis, while it is a metaphor derived from the very familiar experiences of putting things together, is not therefore of absolute validity as an account of thought; unity, as well as plurality, is, when the absolute nature of thought is considered, an irrelevant idea.

CHAPTER V

THE COGNITIVE VALUE OF CONCEPTS

1. In the definition of knowledge which was given above, it was determined that for the attainment of truth thought must copy the object or hold to it a still closer relation. The kind of thought embodied in the concept has now been described: the manner of its growth has been observed; the content of some of the most important concepts has been analyzed. It is now to be decided whether this form of thought meets the requirements of knowledge. What verdict must be pronounced on realism in its various forms, — now affirming that the categories constitute the eternal essence of the absolute being, and now proclaiming that the laws of nature represent the nature of things? Is the concept the method of knowledge? Or must it be denied that knowledge is its function?

2. The concept is either a quality separated from others by abstraction, or a group of qualities, or a composite image. Let the last case be considered first. This general image, though constructed out

of many images, is, nevertheless, one image, and, being an individual image among other images, it is unable to resemble them all. It is even as a general image specially unfitted to resemble them, for the peculiarities of the individuals cancel each other, and the general image thus fails to be a copy of any one of them. It is, as we said, a relatively new image, for there may not be absolute agreement of the individuals in any one feature. The concept man, for instance, is thought to hold of many individuals, though, when they are compared, there may be nothing in the experience of any one which is identical with the experience of another, and there may be nothing in any experience accurately corresponding to the concept. It may be said that all men agree in having such faculties as memory, conscience, will; yet it can be readily seen that these are concepts which in their turn stand for experiences that in their concrete details fail to correspond with each other, and likewise fail to correspond with their concepts. The concept thus fails to be knowledge of a class.

3. But there are concepts which claim to represent a part of all the individuals of a class. There may be a quality, or nucleus of qualities, which is the same in all the individuals of a class, and this nucleus may be copied in the concept. But this

vindication of the concept is also unsuccessful, for such a nucleus is, as a matter of fact, not to be found. It may seem, indeed, to present itself in such a case as that of objects fashioned alike by human design; there may, for instance, be a number of tables made of the same size and shape and painted the same colour. But when such cases are examined, it is found that the likeness subsists only in such an external character as spatial form. It is extremely unlikely that the wood of which one table is made copies in all the details of its fibres the wood of any other table; it is probable that each molecule in the mass is unique. Besides, each table being external to the others is exposed to a special set of influences which do not affect the other. Theoretically, we may see no reason why individuals should not resemble each other, but probably, even in class-characters, they never reach perfect likeness.

As regards the spatial form, it is to be observed that while it is true that space is homogeneous, and that each part in it seems like every other part, the space answering to this description is space in its conceptual presentation. We shall see reasons for believing that this concept has nothing objective to correspond to it, yet if it is regarded as objective, the peculiar differences that hold

within it must not be overlooked. If it is to be taken seriously and is to be an object of cognition, its here must be known as here, and its there as there. The spatial similarity must not be emphasized while the peculiar spatial difference is ignored.

4. There is yet another way of stating the relation of the general to the particular. The concept is the one in the many, it is said. This does not mean that there is a quota of qualities that are identical in a number of individuals. There is an identity, but it is an identity that clothes itself in diversity. The one spirit, for instance, is revealed in a kingdom of souls. Or, again, the one soul puts on many forms in the evolution of the individual.

In the analysis of this doctrine given in the preceding chapter, it became clear that the universal, while creating or being changed into the individual, is still regarded as a distinct entity. We have now to inquire whether this relationship is presented in anything that falls within our observation. Do we know the one in the many?

It is clear that it is not possible to have such an idea exemplified in the external or spatial form of things. A spatial outline that changes into another, constituting that other, yet somehow hidden

in it, is something which has never been seen and can never be seen. The one in the one — for that relation demands consideration before the relation of the one in the many — is not to be found in this sphere in the sense that the theory demands. The familiar relation of the part to the whole is the only representation that can be made at all resembling that called for.

Let us turn to what may be called the inner being of things. Let our own conscious life be considered. For it is of importance here, and throughout this investigation into knowledge, to remember that *the only inner being which we can properly be said to know is the life of consciousness.* The inner being of material objects may be guessed at; if it resembles our own we may gain some acquaintance with it, though only by inference from our own. What is directly and immediately present to us is our own conscious life, and, therefore, *we must test theories of the inner constitution of things by reference to the conditions of our own experience.* When we examine that experience to see if the idea of the one in the many has therein its counterpart, we fail to find any such relation. We have a series of concrete experiences, but the universals which the theory supposes to be incorporated in them do not exist for the consciousness

of these experiences. We are conscious of the sensations of red and green, and we have distinct from these the general idea of colour-sensation; but we are not conscious of that general idea of colour-sensation as present in, and constituting, the sensations of red and green. We are conscious of many wishes, and also of the general idea of wish, yet not of that general idea as incorporated in the particular wishes. Any one, therefore, who sought to know these concrete conscious facts would err if he thought to copy the particulars by thinking of a universal somehow present in them.

But, it may be contended, this criticism ignores the fact that the universal is, or has become, the many individuals, and is not to be found as a separate entity in them. This is, so far, a just objection. We have treated the universal as in some sense distinct, for only on the supposition of its distinctness can the concept claim to be a copy, and so a cognition, of the reality. When the persistence of the universal is denied, and the uniqueness of the individuals is acknowledged, there is a clearer recognition of facts, but the claim of the concept to be cognitive has correspondingly lost in validity. The concept ceases to be the copy or counterpart of anything objective; the one is not a copy of any of the many individuals.

5. And even did there still remain grounds for believing that there is a universal in the many individuals, there could not be gained by knowledge of it all the knowledge that is desired. Knowledge of the universal is not knowledge of the concrete. And the concrete is the reality; it comprises the world of our living experiences, our sensations and fancies, joys and sorrows, hopes and fears. This is the world of whose actuality we are assured. To know the universal, even if it is objective, is not to know these concrete facts. The knowledge of the one must still be outside the knowledge of the other. The heroism of men is not repeated in its actual forms in the general idea of it. The bitter-sweet of an act of self-sacrifice is not reproduced in the general concept of self-denial. The concept is not the measure of reality.

6. Nor may it be said that the concrete individual is not constituted by one universal, but is a meeting-place or plexus of many universals, and that an exhaustive knowledge of these would be true knowledge of the individual. Each universal would in turn betray its externality to the concrete facts. And, even were it admitted that the individual is a plexus of laws, the plexus is more than the universals taken abstractly. The elements of

protoplasm when separated by the chemist are not protoplasm in the synthesis of life. That new element, or quality, that new life, which comes with the supposed synthesis of universals, must be made an object of cognition. To complete the list of them is not to give that life; the continuous discovery of new laws is not contact with the true life of the object. To seek knowledge in concepts is to seek the living among the dead.

7. There is still another way of representing the function of the universal. It may be looked upon as a principle of synthesis, as it was in Kant's system. It might further be supposed that the products of such a work of synthesis may themselves become objects of knowledge. In this case universal would copy universal. It may suffice here to point out that on this theory these universals, though cognitive of each other, are still left external to the phenomena they hold together. These phenomena may be synthetized by them; they are not known by them. Again, we are obliged to seek alongside the knowledge given in universals a knowledge of another kind. For universals can copy universals, but they cannot copy facts of another order.

8. It might still be said that there is validity in this view of the one in the many; only, it is a

validity that is recognized by thought or reason, and not by imagination. This distinction of the *Begriff* from the *Vorstellung* has already been considered, and it has been found that, whenever the *Begriff* is examined, it proves to be a *Vorstellung* in disguise. It is further to be noted here that, if the *Begriff* differs from the *Vorstellung* so much as is alleged, it is thereby unfitted in the case of certain facts for the cognitive function. The *Vorstellung* is a fact and yet cannot be copied by the *Begriff*.

9. For, in short, if knowledge is a subjective copy of an objective order, it cannot consist simply of universals. Universals do make up part of the objective order; they are, at least, facts in the human mind; and they can be known or copied only by universals. But there is much else that cannot be thus cognized. The whole stream of sensations and emotions, which makes so large a part of the facts offered for cognition, must be copied by something other than the universal. The faculty by which we have sensory or emotional experience is not that exercised by the mind when it frames concepts of that sensory and emotional experience. The two series of mental facts are disparate; therefore, the one cannot afford a cognition of the other.

10. This criticism of the concept will receive additional illustration as we proceed to inquire into the objective validity of the categories. It will, further, be found that the categories have not only the faults of the ordinary empirical concepts, but others which attach especially to themselves. Their wider universality is, in the case of most of them, fatal to their truth. They are applied to phenomena other than those in which they originate, with the result that when thus applied they fail more completely to represent realities.

11. Let space be first considered. It should be remarked at the outset that the criticism just passed on the categories does not apply to space; for it is derived from universal experience, and has a peculiar title to be regarded as the form of all things. It is not thereby settled, however, whether the idea of space is a copy of anything objective.

Space, we have seen, is a concept or idea derived from the manifold of sense; or, rather, it is yielded by the meeting of many such manifolds. First of all, is the concept knowledge of these manifolds? It can be knowledge of them only by resembling them. But it is not like them. It does not even resemble a part common is not

a part or element of the manifold. Quantity is not a part or element of quality. That it is an idea distinct from quality, is taught by Kant when he insists that space is distinct from sense-data, and is a form for them all.

From this it follows that the truth of this manifold cannot be presented in terms of space. The place of the spatial relation in the method of truth-finding is not hereby determined. But the claim of space to absolute truth, when predicated of the qualitative manifold, is disallowed. The idea of pure space, while derived from this manifold, is external to it. The charge of externality, and consequent estrangement from truth, can be brought with still greater justice against such abstractions as number. The measurement of psychical states in respect of intensity offers no exception to this principle. Though the relation of one intensity to another may be given in quantitative terms, the description is external. The reality of the feelings, as they are felt, or as they actually exist, is not thus reproduced, nor is any part or element of them so reproduced. The feeling of greater intensity is not a multiple of less intense feelings; and even were it granted that it is such a multiple or compound, the quantitative statement would not cease to be external. Again, were intensity resolved

into extensity,[1] there must still be recognized the difference between the extensity of feelings as felt, and that presented in geometry.

But there is another question that is more prominent in the inquiry concerning the reality of space. It is not asked merely whether space, being empirically derived from experience, is like the experiences from which it comes. It is also asked whether the idea we have of pure space is the counterpart of an objective reality.

It is to be observed that the concept of pure space can be like, and can therefore represent cognitively, only an object that is similar, that is, another concept of pure space. The concept which each man forms may be made an instrument of knowledge whereby other men's ideas of space are discerned. It may well be, as Kant remarks, that all finite intelligences agree in this respect with man, and thus the cognitive use of the concept may have a wide range.

Doubtless this view of the cognitive value of space seems to ignore the problem of its objectivity. Is there not, it is asked, a space independent of the mind to which the mental representation corresponds? It must be answered, that to

[1] Cf. Münsterberg, *Beiträge zur Experime*
Heft 3.

existence of such space is to say that there is, as a counterpart to our idea of space, an idea of space independent of our thinking. We cannot suppose that the space in the mind is an idea, while the objective space is something other than idea. If the space in the mind is a fact of consciousness, the objective space must likewise be a fact of consciousness; otherwise the relation of knowledge cannot obtain between them. It may seem to remove this difficulty to attribute the objective idea of space to the Divine consciousness. Yet when it is remembered that space is a product of fragmentary experiences, and represents the result of the cancelling of one qualitative variety by another, it can be seen that it has too many of the marks of finitude to be attributed to the absolute intelligence.

We have thus found that the idea of space does not give us the truth of our conscious experiences; it also fails to represent anything objective, save as it mirrors similar ideas in other finite minds.

It has been stated already that number is external to our concrete sensory experiences. It may be added that, even if the objective nature of space be insisted on, it cannot be rightly represented by the sciences of arithmetic and geometry. These cannot, so to speak, reveal its heart. The feeling of these is not the feeling of space, and therefore

it is not known by them. Likewise questions about the infinite divisibility of space do not arise in regard to the sensory manifold; nor do they arise in regard to the general idea of space until the mind has substituted for the first form of that concept the idea of a system of discrete units. Moreover, infinite divisibility is an expression that has become merely symbolic, and does not represent any adequate cognitive appreciation of objective facts. This is true also of the expression infinite extension. Into a further psychological analysis of the ideas of infinite divisibility and infinite extension it is not necessary, for the present inquiry, to enter.

12. The category of time does not demand detailed criticism. So far as it is made up of the idea of space, the conclusions to be reached regarding it have been determined in the discussion of that concept. So far as reality and unreality are concerned, it may suffice to refer to the study of these which immediately follows. The feeling which arises upon their comparison, and is the new element in the idea of time, cannot, when stripped of its associates, be taken for the objective form or entity which time is thought to be.

13. Being or reality was shown to have its origin in sensations of touch; and the first question regarding it should be: Does it give the truth

of these sensations? The answer is to be found in the principle that general ideas are not the truth of the particular cases from which they are derived. Being is a composite image of touch-sensations, and cannot mirror the experience of the individual sensations. The category can copy, or cognize, only another idea that is, like itself, the resultant of certain bodily feelings.

There cleaves, however, to this category, as it is usually employed, the weakness of a spurious universality. It is not restricted to sensations of touch, but is applied to everything in the universe. From the time of Porphyry, being has been recognized as the *summum genus* which could be predicated of all things.

It is scarcely necessary to show that this universal application of the category is unwarranted. Let conscious experience be first considered. The sensations of touch are only one group of sensations; those of sight and smell have nothing of the touch character, and when they are brought into relation to touch they are simply associated with it. If we would know the sensations of sight and smell, it is they themselves that must be laid hold of by the mind; it is not directly to the purpose, from the cognitive point of view, to associate with them images derived from some other sense.

Likewise our emotional experiences and our argumentations cannot be understood in their truth by means of this category.

Of the things of nature we know little, and, therefore, can dogmatize little as to what is predicable of them. It may be, therefore, that being can be attributed to them. Yet let it be repeated, this idea, if it is to be cognitive, must be like an idea. If it is maintained that external things have reality, it must be meant that there is associated with them, as part of their constitution, this composite image of touch-feelings. But it is at once evident that to say this is to indulge in crude and precarious hypotheses. The complacency with which we use the category must disappear when there is reflection on its origin and content.

14. The idea of essence was traced to certain feelings of muscular strain. It is not necessary to repeat the criticism passed upon empirically derived concepts that they do not yield the truth of the experiences from which they have originally come. It is to be more carefully observed that this category does not give the truth of other mental experiences; when we say that certain mental phenomena are essential to the soul, we are adding to the phenomena an extraneous idea. If they have not the same content as the idea of essence, that idea cannot

be a copy or cognition of them. Again, the application of the idea to external objects means the externalization of certain subjective feelings; and the justification of such a process as contributory to knowledge has never been attempted.

15. The category of similarity also fails to yield the truth of the many things to which it is applied. It is not an element of the things, but is an independent idea, derived from internal sensations, and then applied to the relation of facts physical and mental. This relational character which it wears is proof that in respect to these facts it is not cognitive. It is not knowledge of the facts; it is a bond between them. It would be cognitive, did there subsist as a link between the two objects the kind of organic feeling which forms the substance of this idea; but there is no proof that it exists. It is not found between conscious states until it is supplied in the act of cognition, and the hypothesis of its existence as a bond between external objects is without the barest foundation of evidence. The question is, of course, not yet being decided, whether similarity, when employed as a symbol, is not exceedingly useful in the mental construction of the world; the present inquiry concerns its absolute truthfulness.

16. The category of substance, also, illustrates

the failure of concepts to meet the requirements of cognition. It is, in the first instance, an interpretation of the self as made up of the somatic consciousness. But there is not to be found this persistent or identical element in the soul's experiences. In the somatic consciousness there is an approximation to such a monotone, but, even in it, variations show themselves. As little, or still less, does experience justify the view that this concept is so connected with the other phenomena of the soul's life that it may be offered as a true representation of them. Again, this category is applied to all existences, material as well as spiritual, and is thought to be the inner reality behind their appearance. But the precarious character of the hypothesis needs no demonstration; the vague body-sensations cannot be proved to be the inner reality of material objects. We have no evidence that there is one material object which is to be thus interpreted; we are still further from knowing that there are many such.

This category has played an important part in the history of science and philosophy, and many attempts have been made to define it, and formulate the deductions from it in precise scientific terms. It received its most elaborate treatment in philosophy in the system of Spinoza. It is

impossible to offer here any complete criticism of that system, especially as Spinoza mixed up with the idea of substance other doctrines relatively independent of it, such as that of genus and species. Yet it may be said that Spinoza made a quite uncritical use of the concept, and that, had he instituted a thorough psychological investigation of its origin, such as he suggests in the case of some concepts,[1] he would never have made it the basis of his system.

The scientific doctrine of substance is restricted primarily to the physical world, and is presented in the formula that the substance of the world is permanent. At the same time, this doctrine is probably now expressed, so far as it is of scientific interest, in the principle of the conservation of energy: the permanence of substance is for science a permanence of mass, and thus a manifestation of energy.

17. We are thus brought to the categories of causality and energy. Let it be remembered that causality is one of our most widely applied concepts. It is thought to hold of the agency of God, of the voluntary actions of men, and of the changes in material objects; moreover, it is one form of connection which is ordinarily thought to

[1] *Ethica*, Par. II, Propos. 40, schol.

obtain in all these cases. The validity of these pretensions must be estimated. It has been seen that causality is derived from our feelings of effort. Now the theory which makes causality a metaphysical reality is not only claiming that these feelings are to be found in mental changes; it is ejecting them into the external universe. It would lend little support to this theory to say that the feeling of effort is the feeling of innervation. Even that feeling, if it exist, cannot *a priori* claim any more metaphysical dignity than a sensation of smell or taste.

It finds no real evidence for its claims in the facts of conscious experience. This seems at first sight a paradoxical statement, for causality is a mental phenomenon, and it is a matter of experience that it does conjoin other mental phenomena; thus, a man wishes to walk, has the feeling of energy, and then experiences the sensations connected with actual walking. It may seem that in such a case the wish is the cause of the sensations of walking. But the feeling of effort which conjoins the two and seems a clear manifestation of causal connection is simply another feeling, or set of feelings, interposed between them. No member of the series is creative: the series is a succession of conscious states; th-

ing of causality, however closely it joins with the other ideas, is yet external to them and relatively independent of them, and does not represent *their* constitution. The concept is therefore not cognitive of the two states; it relates to something foreign to them. Further, it is only in cases of voluntary action that the feeling of effort comes into consciousness. In other cases in which a causal connection is asserted, the concept does not appear in the experience, but only in the intellect of him who reflects on the experience. The hearing of his friend's death is, we say, the cause of the man's grief. But the man who grieves has not present in his consciousness the complex of ideas indicated by the category. It is present only to the reflection that would explain or interpret his experience. By far the larger number of our experiences are neither preceded nor followed by anything resembling the category of causality, nor does the analysis of them show a trace of its presence. So true is this, that psychology no longer seeks the causal bond in the mental series, but in the physiological series which is regarded as its basis: the stream of consciousness is a succession; it is not construed as a causal chain.

The application of the category to the physical series of events means, we have seen, the ejection

of a special set of feeling. Again, as in the previous cases of such hypotheses, we must confess our ignorance of external things, and our inability to say what concepts are applicable to them. But we must, also, again point to the peculiarly crude character of such theorizing. If we are in this animistic way to ascribe feelings of effort similar to our own, to all things in the universe, we should offer some justification for the procedure.

18. The category of energy is, as we have seen, closely akin to that of causality. Like causality, it has the important place it occupies in thought simply because of our inveterate association of change with effort. The theory of energy is expressed in the principles of the conservation and transformation of energy, and an estimate of the cognitive value of the category may thus be resolved into an estimate of these principles.

Let the principle of the transformation of energy be first looked at. It is said that the energy while remaining the same appears in various forms; here it is light, there it is heat, while in another place it is electricity; or it may adopt these various forms in succession. There is first to be notic here the old Aristotelian idea of the one in many; the energy appears in a variety of p

lar forms. But not only does the theory present this untenable view; it joins to it another doctrine not less hard. It teaches that one form of energy passes, or is transformed, into another. Of this, however, science offers no proof. It presents a series of phenomena, and shows that one gives place to another; but this is all that it shows. And the analogy of conscious experience warrants no such statement of transformations. It offers a succession of conscious states each of which is qualitatively distinct; one is not changed into another; at least the act of transformation is not given in consciousness. This doctrine regarding energy thus proves to be untrue of anything that comes within the sphere of experience.

In place of "transformations of energy," the more cautious expression "correlation of forces"[1] has been used. The expression indicates the view that, while it is right to say that one force produces another, it is yet not legitimate to say that one is transmuted into another. This recognition of difference in the forces is valuable, but the principle is not carried far enough. Each force is still a general concept, and the attempt to unify the modes of one force is exposed to objections as much as the attempt to reduce all the forms of energy to unity.

[1] Sir W. R. Grove, *The Correlation of the Physical Forces.*

The law of the conservation of energy states that the energy, while undergoing change, remains the same in amount. This law fails to meet the requirements of cognition, because it reverts to the idea of quantity to explain what is qualitative. Let it be remembered that the idea of energy is derived from feelings of effort, and that thus the physical world is being interpreted after the analogy of our conscious existence. So far as the physical universe has for its being feelings of effort or feelings of any kind, these must be supposed to change from moment to moment, as a man's would change, were he hauled, now one way, now another. To say that the quantity of his sensations remained the same, would be to apply, as we have already seen, categories external to the facts that are to be stated. In absolute cognition, ideas of quantity can be applied only to ideas of quantity.

It may still seem impossible to think energy to be annihilated, or created, and it may, therefore, be concluded that it is never lost from space. But the seeming impossibility of thinking energy away is due to the fact that the idea of being is associated with it, and, so long as we hold to the idea of being, we cannot at the same time introduce the idea of its non-being. To refe

to our conscious experience, we find that each moment it is new, and then vanishes, never to return. So the experiences of nature, the past manifestations of energy, have vanished. And it could not be asserted that our experiences or those of the physical world are still preserved *somewhere*. The fact of change presents to reflection difficulties enough, but it is not likely to be explained by the hypostatizing of space, the supposition that this space is permanent, and the further supposition that our experiences are moved around in it.

It need not be said that no attempt is being made to call in question the value for science of the principles of the conservation and transformation of energy. These may be taken, as we shall have occasion to note, to refer simply to relations of succession and coexistence among phenomena. It is not necessary that science should regard energy as a metaphysical entity.

19. It is not out of place here to refer to the attempts made by Schopenhauer, and other metaphysicians since his time,[1] to install the will in the place of the absolute. These attempts are natural products of the thought of the modern world. Causality is the category made prominent in modern science, and it has developed into the

[1] Wundt, Paulsen, Deussen, may be mentioned.

idea of energy, as the explanation of the physical world. It was also natural that it should give rise to the theory that the will is the basal faculty, and that the universe, physical as well as spiritual, is a manifestation of will. Causality, energy, force, are ideas derived from our feelings of effort, and it is from the same source that the elements of the idea of will are largely, if not entirely, derived. *The doctrine that the physical world is will and the doctrine that it is energy are scarcely to be distinguished.* In view of what has been said regarding causality and energy, a detailed criticism of the theory may be dispensed with.

20. The category of teleology is a general idea derived from the contemplation of a variety of actions directed to ends. It has the weakness of other general concepts and cannot afford true cognition of any one such action. There is still greater departure from truth when it is thought that there is some peculiar efficiency in the idea of an action which in a teleological process precedes the action itself. This idea is, like others, part of the stream of consciousness, and has no special productivity. To speak in terms of causality, it is the effect of the ideas that precede it, and the cause of those that follow it.

When an immanent teleology is proclaimed, there is a theory offered which the facts of experience do nothing to illustrate. An idea which exists only "ideally," according to the demand of such theories, is manifestly something of which we have no direct experience, for all our experiences are concrete and actual, and cannot in this sense be ideal. And it is difficult to see by what right such a conception, which cannot sustain its claims in the sphere to which, by the terms of it, it specially belongs, is to be applied, for cognitive purposes, to other existences, such as plants or animals, or even to the universe as a whole.

This category has had great prominence in modern philosophy. It has been used to interpret the absolute, not only in the design argument, but also in such philosophical systems as those of Lotze and Von Hartmann. So recent a writer as Professor Royce[1] says that while some of the categories are descriptive of the appearance of things in space and time and fail to reach their inner being, that inner life is "appreciated" in teleological ideas. We are now, however, in a position to see how far this category is from giving an appreciation of that life, if by appreciation is meant a knowledge of its actual experiences.

[1] *Spirit of Modern Philosophy*, p. 426.

In *The Riddles of the Sphinx* it is pointed out that concepts, inasmuch as they are timeless, cannot present the truth of this changing universe;[1] yet it is thought that the universe may be interpreted by the teleological concept.[2] It need scarcely be pointed out that teleology is as static as any other category, and is as little able to mirror the changing scene of things. The concept of a stream is not itself a stream.

21. Finally, the category of reason must be considered. It is gained by observation of the work of the mind in cognition and ratiocination. The value of the category as a means to cognition has been considered by many to be very high. Such idealists as Hegel have made it the ultimate truth and explanation of all things. But doubts of its cognitive validity readily arise. The fact that it is derived from observation of those very abstractions which have proved to be so phantasmal, is enough to awaken suspicion regarding it. It does not represent even the rational process. It does not resemble the immediate sensory or emotional experiences. It is not to be assumed that it is like anything in the experience of natures lower than the human. When these lower natures have be explained by it there is called to its assist

[1] pp. 81 f. [2] pp. 180, 199, etc.

the idea of evolution; in the lower nature reason is said to be in process of evolution; and then to explain this evolution recourse is had to the idea of an immanent teleology. But the use of the category is thus rendered yet more unsatisfactory.

22. It is the more necessary to call attention to the criticism of this category; for it is generally its claims in a somewhat different form which we meet, when it is said that the self is a clear illustration of unity in diversity. The self is said to be *in* its various experiences. The reason for saying this seems to be that when we in the act of reflection frame the idea of the self, as being in the experiences, what we really have for the idea of the self is an individual idea; and when, on the other hand, we turn to the experiences, we fail to find in them the self as represented in our idea; and then the self is said to be not apart from our experiences, but given only in them. All this only serves to show that the idea, not being like all the various experiences, is not cognitive of them. It can be cognitive only of an idea like itself.

23. The categories have thus been proved to be wanting when tried by the ideal of knowledge with which we started. They have the defect of the empirical concept and cannot represent the individual facts which have produced them. And,

in so far as they are applied to a wider range of facts, they are rendered yet more false. The concept as an individual thought may correspond to an individual objective fact. But to say that there is such a fact in the world beyond our consciousness is to make a theory for which no evidence can be discovered. The most that it is legitimate to say is that a category, as a mental fact, can be used in the cognition of just such a category.

Concepts, as we said, have been held in honour by many of the great philosophers, but their claim to this honour cannot be established. They were raised to the high eminence they occupy by Socrates and his disciples; but the investigation of their origin and their constitution proves their inadequacy to the function assigned them. Their sway is only an episode in the development of knowledge. The faith in universals and laws of nature must be put aside with many another of man's primitive beliefs.

24. Even were the category supposed to have another origin than that indicated above, it would not necessarily follow that it gives knowledge. Even were it given *a priori*, independently of sensibility, it would not of necessity give truth. We should still be obliged to ask concerning it. Does

it resemble this sensation or that idea to which it is applied? The disparateness would be glaring, whatever the origin of the category. Kant may be appealed to as teaching that categories due to the spontaneity of the understanding do not necessarily have any correspondence with things in themselves. At the same time, the search for the empirical source of the categories has served to make clearer the meaning of this lack of correspondence. *It brings to light the real content of the category and enables us to estimate more justly its value as a copy of other objects.*

25. The above criticism has been directed to the claim of concepts and categories to represent supposed objective realities. Other lines of criticism might have been followed. Mr. Bradley, in his work, *Appearance and Reality*, has criticised the categories in respect of their content, and, as the result of his work, has shown the contradictions which each contains within itself: "unity in diversity" is an instance of such contradictory conceptions. The importance of criticism of this kind is great. Yet whatever contradiction may be ultimately involved in some of our concepts, it has not been the special aim of this work to point it out; the aim has been to determine what sense the categories and other concepts do actually pos-

sess for the mind, and then to decide whether they are correspondent with, or cognitive of, the actual facts present to us.

26. It is not unimportant to consider the bearing of the conclusions that have been reached on doctrines that have been widely prevalent regarding the necessities of thought. Our thinking is said to be dominated by the so-called primary laws of thought, — the laws of identity, non-contradiction, and excluded middle. These may indeed be, and have often been, interpreted as maxims that guide our subjective thinking; thus, the law of identity is said to teach that we should keep to one signification for a concept through all our treatment of it. Yet it is evident that the maxims are not merely subjective; if thought agrees with things, the enunciation of such laws implies that they are laws of things, and thus they regain that ontological significance which they had for Aristotle.

When they are used in this objective way, they may be described as the laws of the category of being or reality. They belong to one distinct category, and tell the procedure of thought when it is using that category. But thought has other categories, and each category has its own laws.

ry laws" of thought are not the only

laws of thought; thought has many laws. Space is a conception which is not of the same quality as being, and it presents relations and laws of its own. The laws of geometry are laws of thought, as much as the law of non-contradiction. Other conceptions, such as substance and causality, present other laws. The laws apply only as the category applies; its limits are theirs.

But, it may be objected, these laws are necessary. It may be admitted that in a sense they are necessary. If we use the category, we must use it in a certain way. If we think that a thing is, we cannot at the same time think that it is not. Even so, the two sides of a triangle must be thought to be together greater than the third side; they cannot be thought to be less. Yet where such categories are irrelevant, the laws have no cogency. Moreover, the idea of necessity must be criticised. Whenever it is used, it will be found upon investigation that *the idea of causality or force is its true significance*. When we speak of the necessities of thought, we are associating with the current of ideas this somewhat crude category. When from such so-called necessities the extraneous idea of force is eliminated, all that can be said is that one idea always accompanies or follows another. If this is true in regard to deductions from concepts or ideas,

it is yet more manifestly true in regard to those judgments in which different ideas are combined. The causal judgment, for instance, is said to be necessary. It is necessary in the above sense if the judgment run, every effect has a cause. It may also be necessary if it take the form, every change has a cause; for there may be present the idea of something to be changed, and thus of something which binds the two appearances together; or there may, unawares, be carried into the very idea of change the idea of force. But if it is said that every phenomenon must have a cause, there is not only no necessity in the judgment; we have found reason for deciding that, in many cases, at least, it has no claim to truth.

27. It is not to be inferred from what has been said that concepts have no function at all in the mental life. First of all, they are of great utility. Long before Socrates reflected on them they had proved their value in the economy of life. In the ordinary concept certain qualities are conjoined, and one of them occurring to the mind calls up the others with it. The sight of one fruit suggest edibility and pleasure; the sight of another suggests poison. The utilitarian value of the concept is enhanced by its character of universality; for, though the fruit now seen is not in all respects

like the fruits seen on previous occasions, it yet awakens the general idea, and edibility is inferred. This ignoring of individual peculiarities may be attended by disastrous consequences, but this only leads to a revision of the concept. The method of thinking in general ideas has the great advantage of using past experience for present guidance. Conduct ceases to deal with a series of disconnected facts; it brings life under general rules. The variety of the world is reduced for practical purposes to simplicity.

Again, the concept is of value in the search for knowledge. For the concept tells what qualities are found together, and in the form of law it presents the coexistences of phenomena. This is not knowledge, but it is an indispensable instrument of knowledge. It is better, however, to postpone the further study of the way in which the concept ministers to knowledge, till we have determined more completely wherein knowledge consists.

CHAPTER VI

EMPIRICISM

1. When we studied sensation, we found that it constitutes to a very large extent, to say the least, the materials and also the instruments of knowledge. The investigation of concepts has not only discredited their claim to be in any special sense cognitive; it has shown that they are made of the materials yielded by sense-experience. It is important now to estimate that theory of knowledge which has professed to keep closer to sense-experience, and to find in it the source of all that goes by the name of cognition.

2. For empiricism combats the transcendental theory that reason is an independent source of cognition. The theory that there are *a priori* principles of thought, it opposes with the doctrine that these principles so far as they have any existence are products of sense-experience under the laws of association. *Nihil est in intellectu quod non prius fuerit in sensu.*

The theory in its modern form attempts to give a

natural history of the mind. It begins with the simplest constituents of consciousness, and traces their combinations. Its point of view resembles that of the atomic theory: as the atoms are the ultimate constituents of the physical world, sensations are the ultimate constituents of the mental world; and as atoms are conjoined into systems and make the physical universe, so sensations are joined or associated together to make the system of consciousness. The revived atomic theory seemed to furnish to the modern world the model of scientific explanation, and it was natural that its method should be applied in the study of the mind. Locke was, therefore, working in the spirit of the science of his time when he traced the development of the mind from simple ideas. Hume expressly announces that his *Treatise* is "an attempt to introduce the experimental method of reasoning into moral subjects," and his procedure shows that he has in mind, not only the experimental method, but also the presuppositions of the science in vogue. In more recent times the theory of empiricism has undergone certain modifications. One influence which has profoundly affected it is that exerted by modern biology. This science finds each member in the complex organism developed for its utility;

and thus there is a new light thrown on the history of living growths. In this light the history of the mind has been eagerly re-read, and the aim of the empiricist is now to show that each faculty is useful, or, in the evolutionary sense, teleological. While this interpretation of the facts is not inconsistent with the atomic theory of mind, any more than the doctrine of evolution is inconsistent with the atomic theory of matter, recent psychology tends to some degree to bring the atomic theory of mind into discredit; for it does not regard complex ideas as combinations of atomic states of consciousness; and it finds that the principle of association, which Hume declared to be the law of gravitation in the sphere of ideas, does not fully account for the coming and going of ideas in the mind. Yet, notwithstanding such modifications of its earlier doctrine, empiricism has never been turned aside from the purpose to trace the natural history of mind as a continuous growth from the simplest germs of sense-experience.

3. Yet, while the historical method is so fruitful in epistemology, and while it was employed by the empiricists long before evolution was the watchword of all the schools, it must be charged against empiricism that

rightly with the epistemological problem. For this failure the historical method is itself partly responsible. When attention is centred on the work of tracing the evolution of the mind, the question, how mental states are related as cognitions to things independent of the mind, is more likely to be neglected. Empiricism has tried to reach an analysis of the human mind rather than a theory of knowledge. There is a further reason for the neglect of epistemology by the empiricist. The mind has been treated as a separate individual thing with its own private, subjective states; and since these states are thus subjective, they have no cognitive reference to any object. This is the point of view taken by Hume when he says that impressions arise from unknown causes; we can only watch these impressions as they range themselves into a system without hoping to find anything cognitive in them. J. S. Mill teaches that we have to do simply with sensations and their order; matter is the possibility of sensation. Mr. Spencer[1] has also endeavoured to show that while all other modes of consciousness are derivable from experiences of force, these experiences are the subjective correlative of an unknowable power. It seems necessary to the empiricist to give up the

[1] *First Principles*, §§ 18, 50.

hope of finding any consonance between our ideas and possible things, and, therefore, he neglects the further problems of epistemology.

4. Agnosticism will be considered later. It must, however, be said here that it is no necessary accompaniment of empiricism, though they have been so often allied. A gnostic theory might be reared on empirical foundations. It is, therefore, incumbent on us to inquire whether the work of empiricism has resulted in an indication of the way in which knowledge is to be attained.

5. It is not necessary to enumerate again the advantages of the historical method to which empiricism has been so faithful, or the misconceptions which are apt to attend upon its employment. Nor is it necessary to do more than call attention to the great service done by empiricism in the emphasis it has laid upon sensation. The philosophers of the transcendental schools, ancient and modern, have poured contempt upon sensation and exalted reason. In this disparagement of sensation they have blinded themselves to facts. It is the merit of the empiricists to have been faithful to this order of facts, and to have recognized its importance in the constitution of mind, and thus to have prepared the way for a theory of knowledge in more complete accord [illegible] ons of experience.

6. The question as to the meaning and function of universals in the theories of the empiricists is one of importance, and one which cannot be answered by any sweeping statements. There has not been agreement in the school as to the presence of general concepts in the mind. Locke, who may be regarded as the founder of the modern empirical school, accepted abstract ideas as mental facts, and proceeded to inquire into their nature and origin. In his account of them he has in view now one and now another kind of abstraction. He says that the mind makes the "particular ideas derived from particular objects to become general," by separating them from "all other existences, and the circumstances of real existences, as time, place, or any other concomitant ideas."[1] But, while Locke gives this account of abstraction, there is a well-known passage in which he speaks of an abstraction of another order. "Does it not require," he asks, "some pains and skill to form the general idea of a triangle; . . . for it must be neither oblique nor rectangle, neither equilateral, equicrural, nor scalenon, but all and none of these at once? In effect, it is something imperfect that cannot exist, an idea wherein some parts of several different and inconsistent ideas

[1] *Essay*, Bk. II, Chap. XI, § 9.

are put together."[1] Locke seems here to be describing, though in an awkward enough way, those ideas which are the resultants of many particular perceptions. It is to be added that Locke likewise recognizes the categories, such as space, time, substance, cause. Probably the clearest evidence of this is found in his treatment of substance. The mind is, he explains, furnished with a great number of simple ideas, conveyed in by the senses, or by reflection on its own operations; it sees, moreover, that certain numbers of these go constantly together, and not imagining how these simple ideas can subsist by themselves, it supposes some substratum; this substratum is called substance. At the same time, substance, while an individual mental entity, is said not to be a "clear or distinct idea." Locke does not pursue his analysis of the conception further.

Berkeley writes sometimes as an empiricist, and sometimes as a transcendentalist. In his *Principles of Human Knowledge*, he says that he can abstract in the sense of separating one part of an image from another by the exercise of his imagination, or he can consider the qualities or relations of things without attending to other qualities which are in real existence inseparable from

[1] *Essay*, Bk. IV, Chap. VII, § 9.

them, as when a man considers a figure merely as triangular without attending to the particular qualities of the angles or relations of the sides. But a general idea of a triangle like that which Locke demanded is to him quite unintelligible.

But Berkeley also finds that the mind has "notions" of things which cannot be presented as sense-images. Again, he speaks of the soul as a substance; and, in doing so, he clearly wishes to distinguish substance from the mere association of conscious states. In *Siris*, he shows his sympathy with the Platonic doctrine of ideas. So that, while sometimes he seems to promise a development of the empirical method of Locke, at other times he proves to be moving in a very different direction.

Hume carried out the empirical method of criticism in a more consistent and thoroughgoing fashion. Berkeley's doctrine, that general ideas are nothing but particular ones which recall upon occasion other individuals, is, Hume says, "one of the greatest and most valuable discoveries that has been made of late years in the republic of letters." Abstract ideas are, therefore, particular ideas which are "general in their representation"; they are particular ideas which happen to have many associates. Hume applies his principles to the categories, and finds that they do not exist

save as particular ideas, or particular ideas viewed in a certain aspect. Yet it is necessary again to call attention to the fact that when he has to explain causality he does not resolve the whole idea into succession, but accounts for the causal nexus or the feeling of necessity as a new impression.

Hume thus gave clear and adequate expression to the atomic theory of consciousness. After Hume, empiricists developed the same theory, giving it a still more mechanical form. No category appears, though but as a new impression. There are in the mind only impressions of sense, and ideas which are copies of these impressions. It is a natural corollary to this theory, and illustrates it, to say that the imagination has no creative power, but can only give a new form or a new order to the materials provided by sense. It can thus be seen that, in the matter of concepts, the empiricists have not explained them, but have explained them away.

It is interesting to observe that in more recent empiricism there is a tendency to recognize fully the existence of concepts as distinct from particular sensations. Huxley,[1] though an adherent of the empirical school, censured Hume for his denial of the existence of relations. Whether or not the

criticism of Hume is entirely justified, the significance of Huxley's position is great. In this connection may be quoted the testimony of Professor James as a representative of that modern psychology which has so largely assumed in the empiricists' spirit the task of tracing the genesis of the mental faculties. He denies that there is a distinct faculty, to answer to the name reason, which creates categories; yet he maintains that categories exist as feelings: they are feelings of relation. "As surely," he says, "as relations exist *in rerum natura*, so surely do feelings exist to which these relations are known."

This increasing agreement of empiricists and transcendentalists is a hopeful sign of the times, inasmuch as it shows that apparently irreconcilable differences of opinion yield to the harmonizing influence of more careful investigation. But great caution must be shown in accepting the general statement of Professor James that the "feelings of relation" are cognitive. We have seen that while categories are cognitive of categories, their cognitive function extends no further.

7. It has been important to consider the disposition shown by empiricists to reject concepts and categories as independent mental facts; for the hope is natural that, though they may have been

untrue to psychological facts in this denial of the existence of concepts, they will prove to be the more sure to grasp the true method of knowledge. But when we turn to the legacy of method left by this older empiricism, we find that it is disappointing. We find only the method of universals in disguise.

8. The empirical doctrine of the method of knowledge is expressed in the theory of the association of ideas.

To understand aright the value of this theory of knowledge, it is necessary to distinguish clearly between the fact of association and the recognition of the association. A man may find himself thinking of some social gathering at which he was present, and may wonder why his thoughts happened to take that particular direction. After a time he may discover that it was some odour that greeted his nostrils which furnished the associative link. In such a case, there was association before and apart from any recognition of association. The principle of association appears as the great principle in the sequence of our conscious states; yet the associative links may be hidden from the unreflecting consciousness. But the series of ideas whose connection is not made intelligible for consciousness, is not, according to empiricism, knowledge. Knowledge arises when the mind recognizes the

association or consciously joins the two ideas together. The odour is one of a number of images with which it is apprehended as "coexisting"; or, it is perceived to be "like" other odours; or, it is connected with a flower as its "cause." Association has thus ceased to be a mere fact; it denotes a perceived relation.

This is not less clear when we turn to the scientific ideal presented by the associationalist, which is the statement of the facts of the world in terms of coexistence and sequence. J. S. Mill, whose *Logic* may be regarded as giving the logic of associationalism, finds that such a presentation is the aim of induction. He assigns an independent place in science to the laws which express coexistence among phenomena. At the same time, he devotes his chief attention to the formulation of the methods for the discovery of causes, for the notion of cause is the "root of the whole theory of induction"; and since, on his analysis, cause resolves itself into sequence, the great object of inductive science is the statement of the phenomena of the universe in terms of invariable sequence. It is obvious from this that science is not satisfied with the simple fact that ideas occur; its ideal, even as expressed by associationalists, is to present the ideas in certain perceived relations.

9. It is evident that, in proportion as attention is given to these relations, there is a return to the old doctrine of concepts or categories. Coexistence is simply another name for the category of space. Succession is the time-relation. Nor is it to be supposed that the empiricist has escaped the necessity of using the categories in his presentation of his propositions. Along with the ideas that are associated and distinct from them is the idea of their relation. Ideas might follow ideas without any thought of their succession; that thought is not given immediately in them; and when they are thought to form a succession, this new idea has joined itself to them. In the same way coexistence may be shown to be a new idea. The relation of similarity, if it is added to the principles of association, is likewise a case in which a new idea is joined to the related ideas. Hume, indeed, says that the relation of resemblance is discoverable at first sight, and falls more properly "under the province of intuition than demonstration. When any objects resemble each other, the resemblance will at first strike the eye, or rather the mind." But two objects which we learn to pronounce similar may be present to the mind long before the likeness is recognized. In such cases, when a resemblance which has long been overlooked is appreciated after pro-

tracted contemplation, the newness of the idea of similarity is readily perceived.

Thus the empiricist is really maintaining the doctrine of categories which he believed he had overthrown. For him, as for the transcendentalist, the cognitive ideas are universals.

10. Yet, as used by the empiricist, they prove to have no cognitive function. So far, indeed, as their existence has been denied, no such function could be sought for them. Were it recognized, they could be cognitive only in relation to what is independent of the ideas they associate, or in relation to these ideas themselves. The possibility of knowledge on either of these suppositions has been already considered. In the former case we should have to affirm that the peculiar psychological product which these principles of association represent has its exact counterpart in the objective world, on which view knowledge of the particulars associated is still wanting; in the latter case, we are asked to take, as cognitive of the ideas, an idea that is external and strange to them.

11. It may, however, be urged that in this interpretation of empiricism the emphasis falls in the wrong place, and that, whether or not these universals are actual ideas in the mind, the stress is to be laid on the particular concrete ideas which

are associated together; the universal is a mere sign of the connection. This way of expounding empiricism is legitimate, and we have, therefore, to inquire whether the method thus left is the method of truth. Does the conjoining of ideas give us the truth of the ideas?

It is the characteristic of association that it is utterly restless. *If knowledge of one thing is sought, there is straightway reference to something else.* If *a* is to be known, *b* is called up; if now the purpose is to know *b*, *c* is called up. If this tree is to be known, other trees, like and unlike, are brought to mind; or the ideas of soil and sunshine and other things usually designated causes of the tree's existence. When I wish to know my neighbour's happiness, association refers me to the good news he has heard; if now I think to understand his hearing of this news, I am referred to the kind heart of his friend. When the mind is thus transferred from one point to another, its desire for knowledge is mocked. Knowledge of the soil and sunshine and all the forces which have "entered into" the tree is not knowledge of the tree itself. Knowledge of his friend's kind heart is not knowledge of the man's hearing of good news, and knowledge of this latter fact is not knowledge of the happiness which followed it. It can thus be seen

how complete is the failure of the common attempt to know things by reference to their causes. The cause is different from the effect. A metaphysical assertion of their identity is foreign to a consistent empiricism, but, even should it be made, it should not be allowed to blind us to their manifest differences. One cannot, therefore, be substituted for the other, nor can an idea which is a copy of one be a copy of the other. If causality is the root of the whole theory of induction, it must be concluded that induction is not the method of absolute truth.

12. It can now be seen that the associationalist fails, in certain respects even more than those who sought the one in the many, to gain absolute knowledge. For those who explained the particular by reference to a universal embodied in it were more faithful to the nature of thought as interpretation; they seemed to be passing to the deeper significance of the thing itself. The empiricist always conducts from the thing to be known to something other than it; even when he presents a universal, in the sense of a particular idea that has many associates, this idea is never offered as the inner truth of its associates, but as an idea that has an external connection with them. Empiricism has endeavoured to hold to the view that thought is synthetic in its function.

13. It need not be said that it does not alter the nature of this method to make research microscopic. The minuteness of the parts that are associated with others as their concomitants or antecedents does not mitigate the gravity of the associationalist fallacy.

14. It is not meant that association is without value in the mental life, and can be dispensed with. It is association, in some sense, that guides the movements of the mind; it is, therefore, involved in all perception of things that is not given immediately in the data of the senses. The empiricist has, therefore, done great service in laying emphasis upon association, and in seeking to reduce its processes to simplicity. Yet, while association is thus indispensable to cognition, the reference from one thing to another which it provides is not to be confused with that relation of the mind to the things which constitutes truth.

15. It is appropriate at this point to consider an assertion that is sometimes made by scientific men. It is claimed that the chief end of science is to find facts. On this view, science does not, after all, make the discovery of laws its chief function; laws have their great importance only because they are convenient in the grouping of facts, or because they lead the way to new facts. Science seeks

laws for the sake of facts, not facts for the sake of laws.

In dealing with this assertion, it is necessary to determine what is meant by facts. It is possible that the reference is to facts of sensation. On this supposition, the law has value as it indicates what sensations are to be associated; the law of gravitation, for instance, indicates to us that, should two clusters of colours and touch-sensations be presented to the mind, their future mode of presentation in a possible conscious experience can be determined. Science would thus take for its basis the philosophy of Berkeley; or it would say that, while there may be an unknown order of facts behind our sense-experience, sensations are all that we have to do with. It is clear that we have here just one of the varieties of empiricism already considered. It is that form of the doctrine of association in which the emphasis is put on the ideas rather than on the principle of their association. It may again be pointed out that there is still association, or the reference from one thing to another. The scientific man does not hold to the particular sensation in itself, but considers it in its relation to others. It may be added that the fact, that science is, in an increasing degree, mathematical, is an evidence that sense-data

are considered in their relations. Thus the claim that science deals with facts becomes, when sensations are taken as the facts, discredited. Each fact when it presents itself proves under scientific methods elusive, and gives place to something else.

But it is probable that the scientist means something different when he speaks of facts as distinguished from laws. His protest is against the general statement of laws in abstraction from individual things. He wishes to see how the laws are manifested in particular cases. The concrete fact is a bundle of laws, and the aim of knowledge is to analyze this combination, determine what laws are represented in it, and see how they modify each other's action. It is obvious that in this case science is still laying the stress upon laws. The only question that needs to be asked is, In what sense is the term law used? If it is not used in the empirical sense of an association of sense-experiences, it must be used to designate the forces back of sense-experience. The law is the general concept of the force, and the concrete fact is explained by a number of concepts. It is not necessary to repeat the criticisms already passed upon such views as this. It has become clear that while scienc

effort to keep close to the concrete, while its instinct for facts is a true instinct, it has not yet shown itself able to transcend the traditional conception of knowledge. The concrete is reality, and the true method of knowledge must enable us to reach the concrete; it must not conduct us back to the universals which have already proved so disappointing.

CHAPTER VII

KNOWLEDGE BY SYMPATHETIC IMITATION

1. That in a man's knowledge of other persons and things there should be reproduced in the mind, by copy or otherwise, that which constitutes objects, is the theory with which we set out. The methods of knowledge which have been passed in review have shown themselves unable to meet the requirements of such an ideal as the theory holds up. It is not to be inferred that the demand for knowledge of this kind is illegitimate. It is now to be shown that there is among our familiar experiences a method of relating the mind to the objective reality which can satisfy the demands of the cognitive ideal. In the cases in which conscious experience is the object to be known, there may be in the mind of the knower a conscious experience like it. We can know our fellow-men thro[redacted] an by this faculty re- tes their conscious

Let it be observed that it is the knowledge of other persons and things with which we are at present concerned. There are also certain phases of self-knowledge which are now to be accounted for; as, for instance, the knowledge by the Ego of its past states. But the question how the Ego knows itself in each moment of its conscious experience needs separate consideration; for such knowledge sympathy is not an indispensable requisite.

2. Imitation is a faculty found in a number of the lower animals. Let the leader of a flock of sheep leap at a certain place, the leap will be repeated by the whole procession. Parrots show a remarkable aptitude for imitating sounds, whistling, laughing, crying, and even uttering articulate words. Dogs have been thought to learn modes of hunting by imitation. Monkeys are known to be specially clever imitators. An animal may even have its instincts modified by imitation. Stories are told of dogs which were brought up by cats and learned the habits of their foster-parents; one dog which had been suckled by a cat showed fear of rain and wet places, and used to watch a mouse-hole for hours together.[1]

Yet while these cases of imitation are not without significance in the present inquiry, it is man that

[1] *Vide* Romanes, *Mental Evolution in Animals*, Chap. XIV.

is, as Aristotle observed, the most imitative of animals. The faculty is manifested in children at a very early age. In their second year, or even earlier, they show a very marked disposition to copy the actions of those about them. The child laughs when others around it are laughing, and it cries when they are weeping. Its attempts to speak are imitations of the sounds it hears, and if articulate words are often too hard for it, it renders more successfully the sounds of animals, as the lowing of the cow or the barking of the dog. It assumes the attitudes of any one it is watching; it goes through the form of smoking; or when some one laces and cleans his shoes in its presence, it tries to execute similar motions.

Nor does imitation cease with the period of earliest childhood. The "six-years darling" often shows remarkable dramatic power, acting over again what he has seen of business, or of weddings and funerals.

> "Filling from time to time his 'humorous stage'
> With all the persons, down to palsied Age,
> That Life brings with her in her equipage;
> As if his whole vocation
> Were endless imitation."

much to interfere with

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mature age there are many examples of spontaneous imitation of movements and gestures. With older persons, as with children, laughter and tears are contagious. A cough in church is answered by a volley of coughs. It is a malicious trick to yawn in company: a corresponding spasm seizes the neighbouring jaws. And there are many who cannot help catching the tricks of speech and manner of those with whom they associate, especially if these are superiors who must be observed closely.

These simpler forms of external imitation may suffice not only to show how familiar are the manifestations of this faculty, but also to give us the clew to the interpretation of the general principle of imitation, and thus to render intelligible those sympathies which are not necessarily shown in visible movements, yet are of such profound significance in the search for the method of knowledge.

3. It is obvious, first of all, that in the imitation there is an association of ideas or mental processes. The child sees an action and then makes an effort to reproduce it by using certain muscles; the visual image and the muscular feeling are two entirely distinct mental states, which are conjoined. To take another instance, the hearing of a word leads to the speaking of it by an association of the two

heterogeneous mental states, — a sensation of hearing and a muscular feeling.

4. It is also evident in many cases that, before the imitation, this association has been established. Imitation depends more or less directly upon habit. The child who moves his hand on seeing another person's hand move is not necessarily associating the visual image with the movement image for the first time. His past experience may have established the association, so that the new stimulus only calls up associates which have been linked before with similar stimuli. We cough when others cough, because with the sound of our own coughing there has been associated the feeling of irritation in throat or chest; then when we hear another coughing the image of that irritation is revived, the associated effort to get relief from it is also reproduced, and thus the actual coughing process is started.

5. Yet it is of great moment to observe that the associations are often modified by the imagination. The imagination is the creative plastic power which, when the materials furnished by experience are presented to it, causes new shapes to arise from them. The child copies a movement which is new to it; for instance, it sees its father brushing his shoes, and then, for the first time in its life, goes through

the motions of brushing its own. It is true, the materials of this new image were derived from experience; the child had used its hands in various ways, and knew also what it meant to reach to its feet and touch them. Yet the combination of muscular movements which was imaged before being executed was new. It was as in other cases of the productive imagination: the materials derived from experience were modified and recast. Imitation, therefore, does not depend merely on habit. It uses habit, and, again, discards it, as service is best rendered to its own peculiar end. The habitual action is not merely habitual, but is allowed its course as a means to an end. The aim of imitation being to copy the object, all that goes to constitute it has its presence determined by that which constitutes the object. Memory and imagination are used, as need be, that the copy may be true.

6. The fact that imitation is determined by the object, or gives a copy of the object, brings into view its essential function. *Imitation is a mode of perception or cognition.* It can be seen that it is not the perception of immediate sensation, for with the sensation ideas are associated. Imitation is that form of perception in which the mind interprets what is given in sensation. Its per-

ceptive character is not altered by the fact that the imagination is called into play. Perception needs not only the memory, but the creative imagination. For perception is interpretation; and the memories of the past do not in themselves suffice for a rendering of the new facts of experience.

7. The presence of external movement in the cases of imitation that have been considered seems, at first sight, to adapt itself awkwardly to such a view. What is the significance of these movements, which are popularly taken for the important part of imitation?

It has become one of the accepted truths of psychology and physiology that the vivid thought of an action is, in a measure, the performance of the action. The idea of the action has become so firmly associated with the doing of it that it excites the beginnings, at least, of the muscular movements. The image of a word is the incipient speaking of it; as Professor Bain[1] expresses it, the idea of speech is a "suppressed articulation"; or, again, "thinking is restrained speaking." So much is this the case that some persons when they think intently become hoarse.

It naturally follows that when the image is more vivid, or when the inhibition on overt action

[1] *Senses and Intellect*, 3d ed., pp. 339, 340.

is withdrawn, the action passes beyond the incipient stage, and becomes the gross movement. Thinking readily becomes talking to himself in the case of the man who lives much alone, and so is more free from family and society criticism. The clearest illustration of the nature of ideo-motor action is to be found in those actions which a man performs in spite of himself. A man is sometimes more ready to throw himself over a precipice by reason of the fear that he will do so: the fear gives the idea of the action such vividness that he tends to cast himself over.[1] The conclusion to be drawn from the observation of such cases is the principle already indicated, that the greater the attention given to the image of a movement, the more certain is the realization of that movement.

When the child thinks of a movement, it thinks of it in this vivid way; the motor image absorbs the attention, and so leads to the execution of the movement. The thinking of the adult is, for the most part, not of this kind. He is economical in the use of his energies, and does not allow them to be spent in useless muscular exertion; and, therefore, the tendency of his ideas to act themselves out is inhibited. Besides, there is economy in the sphere of thought itself. The mind calls

[1] Bain, *Senses and Intellect*, 3d ed., p. 343.

up the details of its images only so far as the necessities of its procedure require. A faint fragment of an image is often all that is needed. It is true of much of our thinking that, the more it is turned to any subject, the more abstract and symbolic does it become. But the child is not economical in its thinking. At first, at least, it does not think in symbols. In its case thought is not a suppressed articulation. When it thinks clearly of an action, it thinks or lives it out. Hence the wonderful dramatic exhibitions of the "six years' darling." When he thinks of the wedding or funeral, he acts it out; when he thinks of the dialogue of business, love, or strife, he conducts it.

Bearing this in mind, we have to consider the child's perception of an action which is performed in its presence. Let it be remembered that the child has formed the habit of associating with the visual images which the movements of its own body produce, the motor images excited by the movements; or it has associated with the sound of its voice the feelings of articulation. Thus the visual image of another's movements awakens familiar motor images in the child's mind; the sound of another's voice awakens the motor images of articulation. Through this

association the child comes to perceive the action, or have an idea of it like the idea of the actor.

The place of the external movement can now be understood. When the motor image occupies attention, the physiological consequence thereof is the movement of the body's members. But it is not essential to the imitative process, which might be complete were the movement checked. It is the *conscious motor image* that is of consequence.

The motor image thus stands on the same plane with other images that fill consciousness and constitute perceptions. It is thus going too far to say that the little child acts as if his whole vocation were endless imitation, for motor images form only a part of the things that interest him. Colours, touches, and other sensations fascinate his curiosity, and absorb, each in turn, his consciousness. Movements have a special power to attract his attention, yet they do not necessarily lead to imitation, — the joyful leaps of the dog may produce from him shrieks of terror; and, besides, there are many movements which baffle his imitative efforts, or can, at best, be represented only in a fragmentary way: the actions which are copied are chiefly those of human beings, and, to a less extent, those of the lower animals. So far as he is interested in the motor images, and is able to

represent them, his vocation is imitation of the external kind.[1]

8. Exception may be taken to this account of imitation, by which it is represented as being of the nature of perception. Imitation seems to prove, rather, to be an exhibition of will, for a voluntary action is one in which the idea of the action precedes the action. But it should rather be observed that, on this analysis, voluntary action is resolved into perception. If there is anything distinctive of the will, it is to be found in a fiat-uttering power that is distinct from the play of motor images. The motor image in itself is as passive as any of the images which the mind possesses. It is, as much as any image, the instrument of perception.

9. Reference has been made especially to the child's experience for illustrations of imitation, for such experience represents the process more faithfully. In the adult the same process may be observed, but usually the adult has less external imitation. Moreover, when he does take to mimicry, he is economical in his imitating, as in the other activities of his nervous system, and the process is abridged. A fragment of an image may be signal enough, without any further presentation of the

[1] For a similar theory of imitation or sympathy, *v.* Bain, ***Mental Science***, Bk. II, Chap. I, 13, and Bk. III, Chap. XI. 5

action in consciousness, to start the muscular movement. Such economy diminishes the perceptive truth of the imitation.

10. The results which have been reached may now be stated. The child or man who imitates another's muscular movement reproduces that movement. But the original movement was preceded by a conscious state, and the movement which is a copy is also preceded by a conscious state like the first conscious state. This *imitation of conscious states* is the significant fact. It is entitled to be called a perception, inasmuch as the associated imitative ideas interpret a sensory impression.

11. We are now brought to a study of imitations in which the muscular movement is not present, or is not such as to attract attention. The conscious states known as motor images are not intrinsically different from other conscious states; they are similar to, or part of, our sensations, feelings of pleasure and pain, and abstract ideas. The conclusion is, therefore, to be drawn, that other conscious states can be copied, and that there is real imitation, though there may be no visible outward movement.

Let a child or a man see a wound in his hand, and at the same time feel the pain of it, wound-vision and pain-feeling are associated in his mind. Let him next see a wound in his neighbour's hand, the

pain-feeling is revived. He thus imitates his neighbour's pain-feeling. Or, let him associate the act of eating an apple with the taste of the fruit, he may, when he sees his neighbour eating an apple, discover in his mind the taste-sensation. Thus in respect of this sense he copies his neighbour's experience. Or, to take another case, illustrative of much in life, let him associate an image or idea with the sound of a certain word which he has uttered, he will, when he hears this sound uttered by another, associate that image or idea with it; and, since that sound was thus an associate of the same mental content in the case of both speaker and listener, the reproduction of that content in the mind of the listener is to be called an imitation. Thus the word horse is, when spoken, the sign of a certain image in the speaker's mind; it calls up an imitative image in the listener's mind. More complex illustrations might be added, but it is unnecessary to adduce them to prove that the whole of life — its emotions, its sensations, its intellections, its volitions — lends itself to imitation, so that apart from external movements the experiences of each individual may be mirrored in the consciousness of others.

It has not been the intention here to state that these states of mind have never any physiological consequences. There are manifold effects produced

by those conscious states which to ordinary observation seem passive. There may even be produced in the body of the observer a condition like that which he is contemplating in another. One of the most remarkable of such cases is that of Louise Lateau, who meditated on the sufferings of Christ till the blood oozed from hands and brow; there is here presented the phenomenon of a pain-idea, associated with the image of a certain part of the body, producing in that part the most powerful effects. Other cases of a similar kind might be cited. It is not necessary here to inquire further into the physiological significance of such cases. They not only show that images used in imitation may produce striking bodily effects; they also throw light on the truthfulness of the imitation. But such violent effects are not to be looked for in all imitations. In a large part of experience the stream of ideas is not attended by any gross movement; and the imitation must be like the original in its quiet flow. In any case, it is to be remembered that what we are ultimately concerned with is the conscious experience: it is the imitation of idea by idea that is important.

12. The kind of knowledge thus yielded may be appropriately designated sympathetic imitation. The term imitation alone is fitted to express adequately its nature; but it is most frequently used to

denote the external movement, and often suggests that nothing more than this is copied, for the mimic would usually regard it as interfering with his special purpose of making sport, should he allow the imitation of ideas to occupy him. The faculty that imitates conscious states is best denoted by the term sympathy. Sympathy means, literally, being affected with: we sympathize with another when we make his inner experience our own. There are, indeed, objections to this term. It has been used chiefly, though by no means exclusively, to indicate fellow-feeling with pain; and its prevailing associations are emotional, or, it might even be contended, sentimental. But the value of the expression consists in this, that it has reference to conscious states rather than external movements, and that it indicates, even if in a restricted sphere, the mode of relation between conscious persons which is precisely that relation which constitutes knowledge.[1] The sphere of this relation must be widened to meet the full requirement of knowledge. I can sympathize with my neighbour in all his conscious life. Not only may

[1] Yet it should be pointed out that the term sympathy is also used to cover the more general instinctive distress which is felt in the presence of certain forms of suffering and which may have little imitation in it. Cf. Baldwin, *Mental Development, Social and Ethical Interpretations*.

I feel his pain when he suffers: when he sees a red colour, I may call up the image of red in my imagination; when he is conducting an argument, I can copy in my mind the train of imagery and abstract ideas which is proceeding in his. This is sympathy in the larger sense. Yet probably the term sympathy does not promptly suggest this meaning, and the misleading associations of both the terms, imitation and sympathy, can be avoided by the use of the expression already given: the method of truth is sympathetic imitation.

13. The value of this method will be more fully appreciated, if we contrast the knowledge which it yields with the knowledge that is offered by science and philosophy. If a sensation of red is in question, science has much to say of the structure of the eye, and optic nerve, and cerebral cortex; of the character of the ether-waves which produce the sensation; of the place of red in the spectrum; of the phenomena of colour-contrast; and of other such things. If the philosopher wishes to present the truth regarding this sensation, he may proceed, as an empiricist, to show that all we are concerned with is the phenomenal series, and that red holds a clearly ascertained place in that series; or he may, as an idealist, trace the development of the

Idea in all the phases of consciousness, finding the sensation to be one moment in this development. But the scientist and philosopher fail to know the sensation of red by these methods. They are explaining it by referring it to something else, — another phenomenon, or a law, or the absolute Idea. They do not get the sensation in itself. If we consider the fact that the faculty by which the sensation is given is not the faculty by which such cognition is attained, the disparateness of the knowledge and its object is still more apparent. By the method of sympathetic imitation we seek to know the sensation by having the same sensation. Were other concrete experiences called up, they would with not less clearness prove to be knowable by sympathy, and not by the methods of science. The chasm between the scientific formulas of psychology and concrete human experience is as wide as that between algebraic symbols and the realities they represent. But by sympathy the observer knows the actual mental processes, for he lives them through in his own experience. He does not use his rational faculty as equally cognitive of all forms of experience: *he knows the experience of each of the other faculties by a corresponding faculty in himself.* For, if like is known by like, if in the mind of the knower that which consti-

tutes the object must be reproduced, it follows that for knowledge of an emotion it is necessary to experience that emotion; for knowledge of a man's act of will it is necessary to "put ourselves in his place"; for knowledge of an abstract idea or reasoning process it is necessary to think an idea or a process in all respects corresponding to the original. Not that other modes of thinking are unnecessary. We shall find that the mind must use them in order to exercise sympathy aright. But in cognition they are to be used as subserving the faculty of sympathy: the essence of knowledge is sympathetic imitation.

14. To sum up: Knowledge must consist in sympathetic imitation, if it is a reproduction of that which constitutes objects; and that such a relation to objects is not a fantastic dream, but a genuine possibility, is suggested by our common experiences.

15. In view of the importance of this faculty, it is desirable to determine its relation to the other faculties of the psychical life. It has been the custom to construe life on the principle of utility. All the members of the living body, and all the actions it performs, are thought to serve, directly or indirectly, some useful purpose. Is imitation a utilitarian function? It is claimed by Professor

Baldwin[1] that it is such: imitation is a "circular" or stimulus-repeating reaction, and the stimulus, so often as it is reproduced, repeats the reaction; the stimuli which are thus maintained are said to be "vital."

16. In considering the present question, it is necessary to remember, first of all, that under utilitarian actions are comprised two species very different in character. There are actions that are useful, in the sense of pleasure-giving, and these actions are repeated that the pleasure may be renewed. The child that has picked up some grains of sugar, and tasted them, will repeat the action to get once more the sweet taste. Many habits are covered by the formula, that the living organism seeks to renew the pleasure it has experienced.

There are other actions which are useful to the organism, which cannot be so described. Many of those which are the response to painful stimuli are not fitted to secure vital stimulations after the manner of the actions already spoken of. They may frequently be useful, but it is as when a man's fainting on the battlefield saves him from being shot. The animal that shams death is by so doing saved from its persecutors, but the action is not done with

[1] *Mental Development, Methods and Processes*, pp. 216, 487, *et passim*.

the purpose of securing some good; the animal is probably paralyzed by fright. The contraction of the organism when it is suffering pain may have the result that it exposes less surface to its enemies, but it does not contract thus with the purpose of saving its life. The contraction means loss of energy, and is due to the action of forces which the organism is unable to resist. And the various manifestations of pain, the depression of the vital functions, trembling, and weakness, are primarily pathological, and when finished bring forth death. These pathological processes may, to repeat, be useful; but they are not designed for use, any more than a man's heart disease is designed in order that he may be exempted from military service.

Moreover, it is probable that many reactions are simply pathological, and do not secure, either directly or indirectly, any good to the organism. And such actions pass into habits.

Again, there are the actions which have been designated "random." These are thought to be produced by an overflow of energy from the brain which is not directed by the will, but takes its way to the most convenient muscles. The infant's waving of hands and feet may be taken as an instance of them. To these may be joined the actions which are due to habits once useful, but now useless, or

even hurtful.[1] The truth is that the activities of organic beings are not at any stage necessarily utilitarian. Those actions are useful in which the energy expended secures, directly or indirectly, its own renewal. And it can readily be seen how great the advantage is of this regeneration of energy. In the struggle for existence those organisms are successful which do not waste any of their energy. The elimination of the non-utilitarian and the non-economical has been complete in proportion to the fierceness of the struggle. Yet this regeneration of energy is not the only activity of the organism. If we should describe the utilitarianism of the organism as its centripetal tendency, we must also recognize the presence in it of a centrifugal tendency.

17. The bearing of all this upon the question of imitation may now be made clear. Actions are not all utilitarian or pleasure-giving; even habitual actions are not always of this kind. It follows that associations are not all of the utilitarian kind. It seems clear that at all stages in the development of mind the formation of associations must have been determined by the play of contingencies that were not subject to the t[illegible]al principle. Association cannot be [illegible]rian principles. Imitatio[illegible]inds of associ-

ation, cannot be put among functions that are intrinsically utilitarian.

If we recall the characteristics of imitation in greater detail, we see that this conclusion is established. It is of great importance to observe that whereas, if pleasure is sought, all the actions of others are disregarded, and new adaptations are welcomed, if thereby the pleasure is made more sure, in imitation the supreme effort is to reproduce that which is objective. So much is this the case, that painful actions are copied: the imitator weeps at the sight of another's tears. Again, there are imitations which do not result in useful reactions: the inner sympathies have physiological consequences, but they do not in all cases produce beneficial effects; still less do they produce overt utilitarian actions.

It may still be urged that imitation is originally of this utilitarian character, but that it becomes a habit in itself, and thus it is that imitations may take place which are attended by pain. It is to be observed, however, that there is herein a recognition of what we have called the centrifugal tendency in organisms, or the non-teleological element in them. It is also acknowledged that imitation has changed its character. It is no longer imitation simply for the sake of pleasure-renewal: it is

imitation for the sake of the imitation. It is, therefore, to be studied in view of this new function. It may be historically true that the hand had originally the function of a fore-foot as well as that of a prehensile organ, but it is now to be studied as a developed hand. The historical genesis is of great importance, yet the newness of the function is of no less significance. If the pleasure-seeking interest was the source of imitation, it has dropped out, and imitation now subserves another interest.

Let it be added here, that this principle, that the function of imitation is not determined by its original causes, is to be applied to other forms of the utilitarian derivation of this faculty. Mr. Herbert Spencer traces it to the conditions in which gregarious animals live. When animals live in flocks, they have a large number of common experiences. The danger which threatens them is a common danger, and they all flee at once. On the other hand, the food that attracts one attracts all simultaneously. Accordingly, the sheep that has fled with the flock before the wolf is ready, as often as it sees the others run, to run with them, even though the object inspiring their terror is hid. Thus [illegible] bought to arise. It may, i[illegible] of sympathy

have arisen in this way, for it may have been produced in very varying conditions. When produced, however, it has its own special characteristics and laws.

18. The argument for the utility of imitation may put on another form, and thereby come into line with the ordinary hedonistic account of conduct. It may be said that if imitation becomes a habit, this habit in its turn is practised for the sake of pleasure, and thus pleasure proves to be still the end of action of this kind. But it can be seen that in spontaneous imitation, which is due to the free association of ideas, there is no question of pleasure involved. And in the more complete exercise of sympathy the imitator so identifies himself with the happiness or the sorrows of another that the pleasure of the self passes out of sight. At the most, it could be said that a man launches himself in this course of sympathy because of pleasure which he will experience at the end of it. But, in such a case, the pleasure is something external to the sympathy, as the pleasure of the man who fattens a sheep that he may dine upon it is external to the physiological processes of the living animal. Moreover, it is to be remembered that in the case of sympathy the pleasure is of the kind that a man feels in

view of the interests of others, and may continue to feel even when these involve his own effacement.

19. We thus are brought back to the view that imitation is a form of perception, and is thus not more directly connected with pleasure and utility than perception is. Various influences may have stimulated its development, but it is probable that in any case it would have developed with the growth of the perceptive power. The vessel may be driven down the river by steam, but the current would have carried it down in any case. This faculty coexists with large intelligence, and hence shows itself so fully in monkeys, and still more in men. In them there is a special development of the nervous system; the fund of brain-energy is great. Usually this energy is not all required for the useful reflexes of a life of habit. It is thus left for exercise that is not utilitarian. There is, accordingly, not mere observation of the obvious qualities of objects, and inference as to their injurious or beneficial character, and the adoption of the course of action most suitable for self-preservation; there is curiosity, examination, and investigation, for the delight of these exercises themselves. Perception of this nature is thus due to the abundance of energy. To the

energy imitation is to be

traced: great perceptive energy must inevitably give rise to imitation, or the complete thinking out, of what is observed. Imitation may thus be regarded as a form of play.

20. In truth, the rise of the imitative faculty marks a new departure in the psychical development of the world. It is one of the characteristics of living organisms to seek pleasure and avoid pain, to use their environment solely for purposes of self-preservation. And when the intellect is humble, and the struggle for existence is fierce, action of this kind tends to be the exclusive occupation. In such conditions, actions observed lead to actions in no way resembling them. The wolf, seeing the lamb at play, is moved to do its murderous work. The roar of the lion causes the antelope to tremble. Or we may find illustrations in our own experience: where the flower opens its beauty, we put forth our hands to it; where the serpent is seen gliding, we shun the spot; when a certain signal is waved, we steer our course in a new direction. In all these cases, the action does not resemble the action observed: the movement of the serpent is not copied by the start of terror; the act of steering is not like the act of signalling. It is true that in the primal life of organic beings an

action is copied when it brings pleasure, or when it is judged from the observation of others to bring pleasure. But in such cases it is a particular pleasure that is the end of the action, and the imitation is discarded at once if the pleasure is not gained, or if a short cut to it is discovered. A new departure is taken when imitation becomes an end in itself, or the experience of the object is contemplated for its own sake. The song does not betray the singer to his enemy; it is echoed by the song. The wound when it is seen does not tempt to an assault on a bleeding and weakened victim: the pain of the wound is felt by the observer as his own. It is the era of that truest and profoundest contemplation which we call sympathy.

21. We are now prepared to understand that the human intellect, in the exercise of its cognitive faculty, has always made use of imitation. Animism is a great essay toward knowledge, in the proper sense of the word. There is in it not merely reaction to stimuli; the abstract view of the individual's welfare is transcended. There is apprehension of the inner nature of things, and that apprehension is gained by imitation or sympathy. For the mental process of the animist is of the kind we have found in imit form of his body he associ-

ates certain conscious experiences, and with other forms, such as those of tree, stream, ocean, cloud, he associates similar experiences. He makes the assumption, indeed, that his experiences may be regarded as objective, yet this is the assumption of all imitation, and of all perception. And if the primitive animist, with his polytheism and mythology, has crude results to show, it is yet true that he has adopted the methods of the cognitive life. Nor does man leave animism behind when he passes to the sphere of philosophy. The concepts of science and philosophy are animistic attempts at imitation of the reality. It is important to observe that, while the method of concepts differs from that of sympathetic imitation in so striking a manner, it yet springs ultimately, as it is commonly employed, from the same root. Knowledge is a copying of the reality. When Heraclitus said that all things are "becoming," when Parmenides affirmed that only being is, they were proceeding upon the principle of imitation; they made these subjective concepts the interpretation of the things which met their senses. Likewise, when science speaks of law, or of energy, it is by the same imitative method interpreting facts; it is ejecting into things what is subjective. Imitation is not left behind with the childhood of the individual, or the childhood of the

race. There is a sense in which all objective cognition is imitation. And, therefore, the question is not, whether or not we will be imitative, but whether or not we will cultivate the right kind of imitation. We can interpret things only in the imitative way. But the charge against science and philosophy has been that they have not been faithful to the principles of a successful imitation. Individual concrete facts cannot be properly imitated by universals, and least of all by universals whose origin is not at all in these particular facts. The experiences of the conceptual faculty may imitate the experiences of the conceptual faculty: they cannot imitate the experiences of the other faculties. It is necessary to return to the study of childhood that it may be understood at what point science and philosophy have gone astray, and how the right way is to be regained. We have seen that in childhood *the faculty which knows is similar to the faculty to be cognized;* and except we become, in imitativeness and sympathy, as little children, we cannot enter the kingdom of truth.

CHAPTER VIII

SYMPATHETIC IMITATION IN ART

1. While science has departed from the true principles of imitation, it can be shown that this faculty has been cultivated by art and morality. It is important, not only to prove the fact that they use it, but also to consider their use of it, in order to get the light which they throw on its nature; and, further, to determine how far in their employment of it cognition is attained.

2. Art is one of the chief forms of the mental life of man. Notwithstanding the extension of science, it still remains true that the majority of those who participate in the intellectual life find their enjoyment in poetry and other forms of art rather than in science. The histories and biographies which are most popular have more affinity for art than for science. Moreover, many of the choicest spirits that the world has known are those which have been consecrated to art.

The interest in art has been, to a certain extent, intermittent. When the struggle for existence is at

its sternest, there is little development of art; but, when the storms abate their fierceness, the flowers of art begin to bloom. The times which allow the cultivation of science are usually the times which allow devotion to art. And thus art grows beside science, supplying, especially in its poetical form, that which science lacks.

3. Art deals with the concrete. Science deals with the abstract, having for its ideal a system of concepts or laws; art has its attention fixed on the individual. Science gives a general definition of tree, or man; art paints an individual tree, or portrays a living character. Science gives a treatise on political economy; art sees the "city dawn amid the clouds." It may be admitted, indeed, that the highest art is universal; but it is so in the sense of presenting to us that which is of universal interest; and it is precisely art of this high type which presents to us every scene and every character in individual shapes. The art which tried to represent abstract qualities, as in the dramas in which each character stood for a virtue or a vice, is justly condemned as inferior to that which holds up the mirror to living men and women. Yet even the drama in which the actors are abstractions does not become a treatise in psychology. Abstractions must act and speak.

Even in allegories, in which the abstractness of the thought is only disguised by a thin veil, the qualities that appear are in the form of concrete realities; courage is a warrior with sword and helm; justice is a maiden holding a balance. For the true artist, if he allegorizes, does so because, when he contemplates the categories of science, he cannot leave them cold and dead: human eyes seem to look out on him; human hands take hold of him. Art ceases to be art when it loses the concrete in the abstract.

4. The important question now arises, How does art deal with the concrete? It is to be regarded as having a twofold function, for it deals, on the one hand, with the world of sense-impressions, and, on the other, with that inner realm which, so far as the individual contemplates the lives of others, is known only by association and inference. When sense-impressions or their copies in the imagination are taken, not as signs which the intellect uses, but as they are in themselves, they begin, under this fostering of attention, to let their interest and their pleasure-pain aspect emerge into prominence; and thus art has the function of ministering to the sensuous nature. The experiences of others are reached in their concrete reality only by being copied; hence art has its sympathetic function. This dualism in the æsthetic life is closely related to the dualism of

self-regarding and other-regarding impulses in the ethical life.

5. The art that is directly sensuous may be briefly considered here, because of the need of distinguishing its function from that of sympathetic art. This consideration of it will also prepare for that reference to it which will be necessary when the nature of self-knowledge is investigated.

6. It might seem natural to say that the function of sensuous art is to minister pleasure. And, doubtless, this is part of its function. For all the senses have a pleasure-pain aspect. They are not merely the gateways of knowledge: they are the goblets from which we quaff the wine of pleasure. And the filling of every sense with joy is one of the great ends of living; and it is one of the functions of art to draw forth this joy and bear it to men. Yet to say merely that sensuous art tries to minister pleasure is to give too narrow a view of its work. It is not merely the pleasure of the sensation that is of interest to consciousness: the peculiar quality of the sensation itself has its interest. The redness of this rose gives pleasure; but it is not merely the pleasure, it is also the redness, that is of æsthetic interest. Pain tends to inhibit interest; yet the interest is not dependent merely on the pleasure. I[illegible]herefore, when the sensu-

ous pleasure of art is spoken of, that the pleasure is not the only æsthetic element.

7. The art that is sensuous is probably, in the order of nature, the first. The earliest form of æsthetic appreciation is simply interest or delight in some sense-experience. The long story of sexual selection is thought to illustrate this kind of appreciation, as it is found even in the lower animals. When the beautiful male finds favour in the eyes of the female, her pleasure in mane or crest is æsthetic. The primitive human being has this æsthetic enjoyment of what is sensuous. The child evinces it also by its attraction to what is brightly coloured.

Further, if man has interests of this sensuous kind, it is natural that he should try to perpetuate them, and reproduce them, and find new modes of them. Interest, unless it is painful, is a motive to its own renewal. In this fact is to be found the explanation of a large part of artistic activity.

8. The selection of colours and combinations of colours illustrates these principles. Certain combinations are painful to the eye; others attract and please. It is one of the purposes of the painter to present the colours in that relation, and in that proportion, which yield the most agreeable result.

Again, there are sounds, and combinations of

sounds, and successions of sounds, which are pleasing and attractive, while others are painful. The purely sensuous element is an important element in music.

The muscular sense, also, has its interests, its pleasures, and pains; and it is probable that these experiences constitute not a little of the beauty or ugliness which we attribute to objects. There are lines of beauty which have that character because of the agreeable exercise of the muscles as the eye sweeps along them. Part of the beauty of buildings, or of human faces, resides in this sense.

It might be shown that the sensations of the other senses have their æsthetic value. The sensations of touch have this æsthetic quality; nor is there any good reason why such a quality should be denied to the sensations of smell and taste. It is to be added, the æsthetic feeling of one sense may blend with that of another; it is found, also, that with the pleasures and pains of the special senses there blend the massive feelings derived from the internal organs of the body.

9. But the direct ministry to the sensuous nature is not the sole function of art. Art is perceptive in a profounder sens It deals with the concrete; en, the concrete is not

merely that which is technically called phenomenon; it is also the inner life of the being that is observed. Art, to be realistic, must present that inner reality also. But this reality is independent, and cannot be known directly. The artist knows directly only his sense-affections, and knows only in an indirect way that which these sense-affections suggest. The perception, therefore, is indirect; and when it is such as to grasp the actual life, it is of the kind we have designated sympathetic.

10. There is a natural transition from the immediately sensuous function of art to the sympathetic function. The attractive object, because of its attractive qualities, becomes the centre of interest, and is then contemplated till its *objective* existence is appreciated. It is as in the marriage of two souls which, attracted by charms and delights, pass by virtue of these delights to the profoundest sympathy with, and understanding of, each other. The interest leads to this penetrating observation. The pleasure felt leads to kindness. And the two feelings so blend together that in many a case it is difficult to divide the conscious state and render to each that which belongs to it.

11. It is not meant that this objective character is never attributed to that which is sensuously perceived, as well as to that which is reached by sym-

pathy. The relation of the artist to colours and sounds is not always that of one seeking subjective gratification; he does not feel the self-reference of one who is using means to please himself. The colour, or the sound, appears to him as a real object; he loves it and admires it as if it was his friend; and the pleasure he finds in it is like his who takes pleasure in unselfish kindness to his friend. Beauty has been called objectified feeling or emotion:[1] it is true that in some cases, at least, beauty is a subjective affection objectified. Moreover, the term imitation is used to describe the art which produces sensuous beauty: the artist is said to imitate or copy the colour of the rose, or the sunset. Yet though the artist, like the unreflecting man, objectifies his sense-impressions, it remains true that they are his immediate sense-affections, and they do not enable him to reach the independent object as the man reaches it who uses the method of sympathy. Moreover, the imitation, when a psychological analysis of it is presented, proves to be something other than a correspondence of subject and object. The man who sees an object, and then proceeds to put it on the canvas, has first an image of it, and then an image of it as reproduced, this second image becoming a motor idea, and resulting

[1] Santayana, *Sense of Beauty*, § 10.

in the actual reproduction. It is only in this sense that there is imitation.

12. We proceed, therefore, to a study of those works of art in which sympathetic imitation finds clearer exemplification. It is interesting to look at the artistic treatment of inorganic nature. The artist personifies nature. The painter who paints the hoary rock beaten by the waves puts human feeling into it, — constant suffering, yet undaunted courage. The artist supposes this to be there, as he supposes the presence of feeling when he sees the figure of a man, and enters into the realization of it by sympathy.

13. In architecture, inorganic nature is moulded to man's thoughts and feelings. Schopenhauer[1] has given an interesting theory of the meaning of beauty in architecture. He says that it is the function of this art to present the laws or forces of matter; and that the building is beautiful which exhibits clearly the idea of burden and support. The natural tendency of the materials composing the building is to fall to earth in a mass, but part of them is lifted and held aloft. In illustration of this theory we have his contention that the Greek is the most beautiful of all styles of architecture, because the horizontal beam resting on the pillar brings out

[1] *Die Welt als Wille und Vorstellung*, Band I, § 43.

most vividly the idea of burden and support. Compared with a Greek building, a Gothic is barbarous, for the idea of burden has vanished in the arch. Exception might readily be taken to these deductions from the theory: it may seem that they are, even on Schopenhauer's principles, unjustifiable, and that the round or pointed arch represents, though in a different way, yet more finely than the beam and pillar, the idea of burden and support. Such criticisms, however, should not hide from us the value of the general principle laid down.

If we go on to inquire by what exercise of the mind this idea is gained, we can see that it is reached through animistic sympathy. This is not, indeed, Schopenhauer's account of it. He says that in art we are contemplating ideas, not abstractly, as we contemplate them in science, but as they are given in concrete things: while, for instance, science considers the laws of fluidity, art sees them embodied in a fountain. The statement is valuable, as calling attention to the interest in the concrete which is characteristic of art. Yet art has no special regard for abstract ideas. The reality is not for it an embodiment or knot of them. They are for it, as art, only incidents in life's epos, like other conscious experiences. It is by another way than that

ideas that the builder becomes artistic.

The primitive man, when he came to be in a position to attend to such things, began to notice the pressure on the rock-pillars of his cave, or on the posts of his house. The post or the rock-shaft became for him a living thing; and he seemed to feel the effort made by it to sustain the burden. He admired its strength, and as he built further he took care that the pillars should, like athletes, have their strength tried, but yet that the weight should not be, or appear to be, oppressive. He became an artistic architect because he personified, and knew this personified object by sympathy with its individual feelings.

14. In the artistic representation of living organisms the same sympathetic treatment can be observed. It is probably present, though in an obscure way, in the delineation of physical beauty. Probably in the beauty of, say, a human face there is more than the sensuous pleasure we experience. Schopenhauer believes that the touchstone of the beauty of human features is the utility of each for the well-being of the whole. The brow, he says, must be well developed, for that is the seat of intelligence; the mouth must not be large, else it resembles the muzzle of a brute; the beauty of the man is not the beauty of the woman, for the life-work of the two is different. If this view is

correct, it is likely that the painter and sculptor will be found to have an appreciation of these features differing in character from that of the physiologist. It is, indeed, the tendency of men of artistic temperament to look on each feature as having an individuality, and even a personality, of its own, and to enter sympathetically into the feelings supposed to belong to this objective entity.

But there is a presentation of the outward form of living creatures which much more clearly reveals the presence of sympathy. Emerson quotes somewhere the remark of the painter who said that, to paint a tree, you must for the time be a tree; you must, so to speak, enter into the tree's life, and share its hopes and fears. The painter and the sculptor can likewise represent a tiger or a lamb in such a way as to make known to us the fierceness of the one, or the timidity and meekness of the other. But such artists furnish yet fuller insight into the human soul: their art reaches one of its highest attainments in the representation of the human face. The artist has to reveal the soul behind the face that is depicted. The revelation is, indeed, only for the seeing eye; but it is there in those "touches which are known to souls." And the appeal is made to the spectator's sympathy as when the living face of the individual himself is present.

15. There are, however, arts which appeal yet more unmistakably to the sympathies. It would be easy to offer plausible objections to what has been said of the presence of sympathy in the arts already considered. It might be urged that the painter and the sculptor are not making use of the sympathetic faculty, but are rendering as accurately as possible the appearance of the object as it affects the senses; and to say that sympathy is essential to the appreciation of architecture might seem to border on the fantastic. But there are forms of art in the presence of which such objections cannot be sustained. It is doubtful whether they can be adhered to in view of certain kinds of music; it is not readily conceivable how they are to be reconciled with certain forms of poetry.

16. Music, as we have seen, has charms which are immediately sensuous. But it has a further meaning: it expresses the emotions. All the feelings of the soul find their natural expression in vocal sounds. The joyful or sorrowful stirrings of the spirit are reflected, especially in the case of primitive man, in inarticulate sounds. Even when that which is offensive in such sounds is eliminated, their power of suggesting certain experiences is not diminished, but may even be increased. By virtue of this empirical yet firmly established association

of sound with emotion, music is able to evoke sympathy with the experiences of the musician. The original form of music is that given by the man who chants his own joys and sorrows, or those of others. In the use of instruments, and in the rendering of music apart from all its natural context, there may be much to perplex the power of interpretation. Yet the sympathy, if rendered vague and uncertain, is still present. It may be claimed, indeed, that music has now gained a new function; in the case of some, the appreciation of music seems to become a purely intellectual perception. Yet such perception is like that of the students of illuminated texts who, absorbed in the contemplation of the letters, entirely lose the ideas which the letters are meant to convey. However this may be, it is true that *some* music is the utterance of the emotions, and is able to elicit sympathy with them.

17. Poetry, like music, makes use of sounds; but the sounds which poetry uses are articulate words that are wedded to definite meanings from which, except in peculiar conditions, they cannot be divorced. It is true that poetry, like other arts, has an æsthetic element that is immediately sensuous: its appeal to the ear resembles, in certain respects, the sensuous appeal of music. The words of which poetry makes cannot lose their

supreme function of acting as symbols of definite conscious experiences.

In the lyric, the poet is expressing his subjective feelings. His joys and sorrows, his loves and hates, are the theme of his song. Moreover, the expression of them is direct. The poet is not studying them in a scientific way; they are not objective to him; he is not writing his autobiography. He is absorbed in the living of them, and his song is the experience finding a voice. If he speaks of other things or persons, it is as they are related to this subjective mood: the grass, the birds, the stars, are not interesting for their own sakes, but as they affect the singer.

"The dark, dreary winter and wild driving snaw,
Alane can delight me."

"Break, break, break,
On thy cold gray stones, O sea!
And I would that my tongue could utter
The thoughts that arise in me."

The lyric often, indeed, approximates to the epic, but in so far as it remains lyrical it retains this subjective character. Thus, the religious hymn seems to be largely taken up with the divine attributes; but it is not a theological treatise, inasmuch as it merely reflects the course of ideas and emotions in the writer's mind.

It may seem that the lyric excludes the exercise

of sympathy by reason of its subjectivity; and this is the case so far as the lyrist is concerned. The sympathy which is elicited by the lyric is like that elicited by the music which expresses the musician's experience. The lyric reveals the poet's soul in its concrete emotions and fancies, and thus evokes the sympathy of others. To understand the lyric is to perceive the concrete life of the poet, and to feel it as he is living it.

There is a special function of the lyric which should be referred to, for it is often used without the awakening of any sympathy with the writer. It may be adopted by the nation, or the church, and each member of these communities makes it his own without giving, it may be, a moment's attention to the author. But this is because the author aimed at expressing the feeling of the community: he sang the song of the community; and, therefore, the community adopts the song as its own. The sympathy referred to could come only from one outside the community, or one who for the time should adopt the attitude of an outsider.

While, therefore, the sympathy which the lyric excites is not that of the poet, it is important to note its power to evoke sympathy; he for whom it is something objective understands it only by sympathy.[1]

[1] Mus[illegible]'s definition of art (*What*

The poet becomes the interpreter of that which is objective to him when he passes from the lyric to the epic. In the epic the poet is interested in the life of another human being. The hero is made to live in the poet's imagination; he speaks in his own voice; when he acts, the peculiar emotions associated with his action are vividly realized. The poet may adopt less poetical modes of expression, and speak of abstractions like justice or courage, but all this may be subordinate to the representation of a living personality in its concrete actuality.

It does not disprove this statement regarding the epic to say that few epics have been so purely objective, and that even a poet like Milton projects his subjectivity over his characters. It only shows the limits of the poet's sympathy; the characters with which he can sympathize are those like his own. None the less is it true that he has made these characters objective. And the fact that they are so like himself is in itself an evidence that his relation to them is that of sympathy.

The novel is, in many respects, like the epic, which it has to a large extent superseded. Some

is art? translated by Aylmer Maude, p. 50). But that definition does not cover all forms of legitimate artistic activity.

of the more sensuous factors in poetry are omitted; and yet, while this prejudices the artistic completeness of the novel, the loss is counterbalanced by the greater freedom which is gained. It is, other things being equal, a more lifelike picture that is attained.

In the epic and the novel the characters do not always speak for themselves. There are passages in which the writer is describing them. Such descriptions are more or less external. They do not make the appeal which the actual words of the character represented make; for the association of inner experience with such words is of the most direct kind known to the mind. Moreover, in the epic or novel there may be a tendency to adopt some of the methods characteristic of science: to make much of abstractions, and to expound causal relations. Not that it is always a disadvantage to mingle the more scientific with the more artistic. Except for the greatest writers, it may be a surer way of attaining the end desired. Yet it does not indicate the completest absorption in the object.

That completer absorption, that more perfect vision, that fuller sympathy, are given in the drama. The drama is the synthesis of the epic and the lyric: like the epic it is interested in the

objective; it has a lyrical element, inasmuch as each of the characters represented is self-revealing. The dramatist shows skill in selecting those passages of the inner life which are best fitted to yield this revelation in a clear form. He may, indeed, help us to understand that life better by indicating its effects on other lives; yet the primary method is that of self-revelation. It need not be said that the account of this inner life is not of the scientific kind; the life is so disclosed that we feel it as if we were living it.

It is worthy of being recalled that the drama is meant to be acted and spoken. Perhaps all poetry is taken too abstractly, and too much apart from its original intention, when it is read silently. It demands the human voice for its instrument. The drama makes its appeal not only through spoken words, but also through various bodily movements. There is thus additional help toward that insight into the inner life which the drama is meant to yield.

18. The two principles of artistic insight and artistic production which concern us here may now be restated. First, art deals with the concrete, not with the abstract or universal. Again, since the concrete is not merely sensation in its immediacy, but the inner life of independent beings,

we have found that art, to fulfil its function, must make large use of sympathy. It has been seen that for poetry especially sympathy is indispensable.

19. It is important for a clearer understanding of these principles that we should recall the two main forms of æsthetic theory. There is, first of all, the theory that the object of art is to please. We have seen that this doctrine is, so far, true: there may be many works of art whose object is to give pleasure. This is true of much sensuous art, though it cannot be conceded that it is true of it all. But there are many artistic activities which the theory entirely fails to cover. It does not take account of the objective interests of art. Even so, to refer to the parallel ethical controversy, the utilitarian theory, that actions are performed for pleasure, holds true of certain actions, but it is not true of all; for instance, the important group of actions known as ideo-motor cannot be explained by it. And there are many artistic interests and artistic products whose impulse is not pleasure. It might be thought that the existence of pleasure is at least a negative condition, since nothing will be sought after which gives pain; yet, though the inhibitory power of pain is great, it is doubtful if even thus much of the theory can be defended as universally true. From what pleasure

arises the interest in a tragedy? In the tragedy men are seen to become the prey of disaster. And the disaster is not necessarily the manifestation of retributive justice: it may be such in some cases, but Schopenhauer is right in scornfully rejecting the view that the suffering in all cases is retributive. It may be urged by the optimist that the suffering is to lead to happiness somehow; but those who cannot put confidence in such consolations may yet find interest in the tragedy. They are interested as they are interested in the sufferings of their own children; not less, but more, when they can discern no prospect of alleviation or happy termination.

In connection with the hedonistic account of art, reference may be made to the theory which Mr. H. R. Marshall has offered regarding the origin of artistic production. He traces it to an instinct to "act in such a way as would attract advantageous objects to us."[1] Mr. Marshall proceeds to say that all selfishness has disappeared from this instinct. But we must go a step further. Whether or not the artist originally sought to attract objects to himself, he has not only ceased to do this selfishly; he is in many cases making other individual things, or persons, the centre of attraction. He is lost

[1] *Æsthetic Principles*, p. 59.

in his work: it is his production — the Madonna, or Apollo, or Hamlet — that we are interested in. Moreover, it is often the inner life which he presents: that is to say, he has become sympathetic, and is enabling us to enter into his sympathies.

20. In sharp opposition to the hedonistic view of art is the idealistic theory of writers such as Schopenhauer and Hegel, which finds its meaning in contemplation of the objective. The defect in this kind of theory is that the objective is regarded as a system of ideas or categories. Hegel, whose view may be taken as typical, says that the beautiful is the Idea as it appears to the senses. The metaphysics which identifies the reality with the Idea need not be criticised at this point. But even were it granted that the Idea is the reality it is alleged to be, it must still be said that the Idea cannot appear to sense. The Idea can be known only by reason; and sense can perceive only what is sensuous. The theory that beauty is known by sense remains a sensuous theory. But, in truth, the world contains much more than ideas, in the sense of universals; and in the appreciation of the beautiful there are many other faculties besides sense called into exercise. Sense mirrors sense; but intellect also, as we see in th h depicts a philosopher's mer ellect.

It may be added, that the perception of that unity in diversity which has often been thought to constitute beauty might coexist with the exercise of sympathy; but, when we consider that this perception is one of the peculiar activities of the abstract intellect, we must hesitate to say that it is the distinctive factor in æsthetic appreciation.

21. The sympathetic method of art being now analyzed, it can be seen in what sense art is truer than such a science as history. Aristotle said that poetry was more philosophical than history because of the unity of the action which it presented and the typical character which it reached. But it is not because of its approach to conceptual science that poetry is truer than the recital of the succession of phenomena, but because of its closer contact with the concrete forms of actual life. History, it is true, has much in common with poetry. It may be regarded as a development from the epic. Like poetry, it deals with what is concrete. While such a science as mechanics gives universal laws, without reference to any particular individual existence, history treats of individuals and of particular facts in their experience. Nevertheless, history treats the concrete facts according to the abstract methods of science. It has become differentiated from the epic; and its ambition is to trace in the sequence

of human experiences the causal nexus, or that complex causality which is indicated by the term "development." But how false this historical view of the facts is, we can see by recalling the unsatisfactory character of such concepts as causality. It can be readily seen that the poet resorts to no such methods of rendering the experiences which he is recounting. He is not led away from them to a study of what are called their relations: he is interested in the experiences as they were experienced. The transition from one experience to another is not for him that which is cogitated by an observer of abstract theoretic interest: it is the transition as that is in the actual consciousness of the individuals he is contemplating. Thus the poet is truer to facts. Poetry has its home in the concrete, and its method is the method of truth.

It follows that the other sciences which deal with man, and likewise those which have nature for their subject-matter, have not the method of truth as it is possessed by poetry and the other arts.

22. Does art, then, take the place of science? Are we, in order to get that truth which is the ideal of thought, to leave the laboratory and the historical archives, and betake ourselves to the study of poetry? In [illegible] been said, the question can[illegible]ive with-

out important qualifications. For there is a sense in which art does not imitate the reality. It is creative; it idealizes. The beauty which it presents may be a dream. It was not any one individual that served as a model for the sculptor of a Greek god, or the painter of a Madonna; it is not the historical Hamlet that Shakespeare brings before us. Art does not reveal the world of actual facts: it reveals a world of its own making. It must not, indeed, be forgotten that art, in dealing with the objects which it creates, applies the method of truth, and has in regard to them the vision divine. Yet the fact remains that it has not held itself, after the manner of science, to the concrete particulars of the actual world. It has changed them in its representation of them. It is one of its glories that it is a dreamer of golden dreams. It may seem that there are exceptions to this principle. In architecture it is the actual material mass that is dealt with; in sculpture and painting the object may be reproduced with great fidelity. It is to be noticed, however, that such arts make a less direct use of the sympathies. There is sympathy on the part of the artist, but he is not committed to any special form of it. It is in poetry that sympathy becomes more definite, and it is precisely in poetry that there is the freest departure

from the actual world. The poet makes his own world that he may enter into sympathy with it.

While, therefore, we find that art makes use of sympathy, and is therefore to be regarded as possessing the method of truth, it is yet to be acknowledged that it has not employed the method so as to reach knowledge. Art is incomplete when taken alone. Its method must be supplemented by other methods, that the vision of truth may be attained.

CHAPTER IX

SYMPATHETIC IMITATION IN MORALITY

1. The morality of which sympathy may be claimed to be a constituent is that which pertains to the social relations of human beings. There are duties which are binding on the solitary individual: temperance would be obligatory were he cut off from his fellows in hopeless isolation. But there are other duties which devolve upon the individual as a member of society, and for their proper discharge he must exercise the faculty of sympathy. Thus, in the sphere of social relations, sympathy is one of life's ideals.

2. It is generally conceded that the Christian statement of man's social duties is the truest that the world has known, and that in important respects it presents the final and absolute law of conduct. Man is to love his neighbour as himself. This means first that he is to love those that are his friends; it means also that he is to be kind to the unthankful and the evil; the man who is his enemy, he is to feed and clothe; and he is to offer

his cheek again to the smiters. This love shows itself in ministries of all kinds. It takes upon itself the lowliest offices, such as the washing of feet; or, by the ministry of teaching and exhortation, it makes the souls of others the possessors of knowledge and virtue. This Christian love is a social ideal which depends for its realization on sympathy.

3. It is true that there is a love which does not depend upon sympathy. Human beings are attracted to each other by various charms: beauty of person, or sparkling wit, or store of instruction, or the advantages of wealth. To quote Spinoza:[1] *Amor est lætitia concomitante idea causæ externæ.* The most striking example of such a relation is found in romantic love: the man delights in the beauty of the woman; the woman in the beauty of the man. There is not necessarily any sympathy in such relations. Each seeks the other for his own pleasure; and, were that pleasure to cease, the intercourse would lose its charm. The inconstancy of friends, so much deplored, is to be explained partly on the ground that the friendship consisted in nothing other than the pleasure which the individuals could get from each other; they ceased going to the well when it became dry.

[1] *Ethica*, Par. III, Prop=

This love is not to be condemned in any sweeping way. It is legitimate for an individual to receive as well as to give, to seek pleasure from others as well as to bestow it upon them. Yet it is, at least, to be observed that such love is not disinterested and sympathetic. It may develop, even in the romantic form, into a great selfishness.

There is a theory adopted by some writers on ethics, according to which all so-called love is ultimately of this interested character: a man does good to others, it is said, in order that he in turn may be helped by them. Yet it has come to be conceded that, as the effect of habit, a change has come over the impulse to such actions, and that they are now performed without a view to selfish ends. It is obvious that such benevolence is not of the same quality as self-interest. In any case, the benevolence which is the Christian ideal cannot be construed in terms of selfish interest. Love is not pleasure derived from others: "If ye love them which love you, what reward have ye." A man may do many good deeds from a selfish motive; he may give his goods to feed the poor, and yet, from the ideal point of view, be nothing.

4. It might, however, still seem that sympathy is not indispensable to love or benevolence. It is surely possible to do good deeds from motives

that are unselfish, while yet there is no exercise of sympathy. A man may desire to relieve those who have been visited by famine in some distant part of the world, and with this end in view he may make a donation of money. In giving the money he does not think of advantage or renown to accrue to himself; yet, on the other hand, there seems to be little more sympathy elicited by the individuals befriended than there is when he invests his money in railway stock. It may be found, also, in many good actions that are done from habit that, while there is no conscious selfishness left, there is likewise no conscious sympathy. Further, it is noteworthy that those who hold up benevolence as the great social virtue do not make prominent the element of sympathy, but rather point to certain good ends which are to be accomplished, and call men to supply the means to these ends. Even Christian preachers do not magnify the place of sympathy in the ideal life which they describe. They exhort to kindness and forgiveness in a general way; they also call upon the church to meet the needs of the heathen. How often do they handle the theme of friendship?

5. Yet, while there is much good to be done apart from any direct

while the obstacles to sympathy are many, it is surely this finer relation, this closer intimacy, that is the ideal of Christianity. "Bear ye one another's burdens"; "rejoice with those that do rejoice, and weep with those that weep"; "whether one member suffer all the members suffer with it, or one member be honoured all the members rejoice with it"; the great "captain" and "high priest," Jesus, is "touched with a feeling of our infirmities": in the light of these sayings we should interpret the commandment of Jesus, "Thou shalt love thy neighbour as thyself." The highest ethical attainment in the social life is friendship; and a perfect friendship is a perfect sympathy.

6. It is to be noticed that this higher love does not conflict with that love which is pleasure derived from others. The delight which a man feels in others may well bring him to a closer interest in them, and ultimately to sympathy with them. Romantic love often illustrates this process: the mutual delight of man and woman in each other may develop, by virtue of the interest which such delight awakens, into the most sympathetic friendship.

7. The love of friendship can be seen to be like knowledge. For what is such love? "Two souls with a single thought." Often, indeed, when

knowledge has been weighed, it has seemed to be less than love; and this judgment of knowledge is just in view of much that claims this name. In his *Social Evolution*, Mr. Kidd represents knowledge and benevolence as opposed to each other in their effects. This is because the intellect is taken abstractly. When knowledge is at its truest, the opposition disappears; for knowledge is sympathy.

8. The reason for thinking that in the moral life we reach that acquaintance with reality which is denied to the abstract intellect must not be misunderstood. Kant taught that, while the theoretical reason fails to reach the noumenal world, the eternal realities disclose themselves to the practical reason. But the moral conceptions which Kant cherishes are not sufficiently criticised: the moral maxims are not, as he thinks, independent of experience, but are the embodiment of general ideas derived from experience. It is therefore into a realm of abstractions that Kant conducts us; and ethical concepts fail of truth, even as do those of the understanding. If we are led to reality through morality, it is not because starting from moral facts we make abstract theories, but because in the very living of the moral life, in certain of its highest forms, we

are in closest cognitive contact with a reality other than our own being.[1]

9. Yet while morality is able to a certain extent to meet the demands of knowledge, it has certain limitations which render it incapable of fully meeting these demands. It is hard for morality to separate itself from what is utilitarian; nor is it desirable for the most part that it should. It looks to helpful action; it sympathizes that it may succour.

It is on the same principle that morality is limited in respect of the objects with which it deals. It restricts itself to human beings; or, at the most, it extends its mercy to the needs of creatures that have life. Lower in the scale of creation it does not go: the vast material universe is ignored. It may, indeed, be that, were knowledge of the lower forms of existence more complete, it would be found that in their case also men would recognize duties; but this supposition only brings into clearness the fact that morality is interested in things and persons only in so far as it is able to minister to them.

This principle is further illustrated in the fact

[1] Attention may here be called to Mr. Leslie Stephen's statement of the relation of sympathy to knowledge (*Science of Ethics*, pp. 228 ff).

that morality is interested only in the present and future, and does not dwell in the past. It is true that for ethical purposes men must be interested in the past, but the sympathetic reconstruction of the past is not ethical. It may serve ethical purposes; yet when done for its own sake, it is not ethical. On the other hand, the aspirant after knowledge must reconstruct the past, and live over again the life of king, and poet, and pioneer.

Knowledge, therefore, is wider than morality: they both use sympathy as a method, and at certain points they coincide; yet sympathy for the sake of sympathy is not the prerogative of morality.

10. If morality is compared with art, it is seen that, so far as it exercises sympathy, morality keeps to concrete living realities, while art tends to pass into a realm of its own creation; yet that, at the same time, it is art rather than morality which delights in contemplation purely for its own sake.

11. It is not to be forgotten that many of the greatest thinkers have put knowledge among the virtues. Knowledge, so far from being a means to some form of living other than itself, is regarded as itself an end, and, moreover, as the highest end in life. Yet it is not precisely this

exaltation of knowledge as the highest of the virtues that is here advocated. It may, indeed, be that knowledge represents the highest ideal possible for the human spirit; this view has especial justification, if knowledge is to be interpreted as sympathy, for then knowledge, coinciding in part with morality, yet goes beyond it, to take to itself the interests of the whole universe. Yet what it concerns us here to emphasize is that, even when morality is taken in the more restricted sense, it is not merely one virtue to be supplemented by knowledge as another virtue, but involves in itself the exercise of that sympathy which constitutes the essence of cognition.

12. Morality, to sum up, may be taken to show that the sympathetic relation is, in a general way, possible; and also to offer a clear illustration of its character as contemplation of the concrete.

13. It may be appropriate at this point to call attention to the important place which sympathy has in religion, in the forms which it has assumed among us. When fear is the prominent element in religion, sympathy with God may indeed be regarded as possible, but it is not likely to exist: the effort of the worshipper is to adapt himself to an unpleasant environment. But when religion has become love to God, sympathy finds entrance.

There is for Christians not only the command to love God; there is the doctrine that God has been manifested in a human experience, and that He dwells in the hearts of His people. To this teaching may be added the theory, which is not directly scriptural, but which has commanded the support of many devout minds, that God is immanent in all things. Thus nature in man and in things is the "garment of Deity." He "prayeth best," hath closest divine communion,

> "Who loveth best
> Both man, and bird, and beast."

It may be that when religion and knowledge are at their highest, they are not two, but one.

CHAPTER X

SYNTHESIS OF THE METHODS

1. The investigation into the nature of sympathy has shown us that it is a method of reproducing in the observer a concrete experience other than his own. We have seen that this method is essential to the higher works of art; we have also seen that sympathy is the life-blood of the higher morality; it has even been found that there is a sense in which it is illustrated in the employment of general concepts. Yet in none of these cases is there offered such a use of the principle that the truth is its sure result. Morality employs it to determine action and control the utilities of life; in art it does not devote itself to what are usually designated facts, but reflects the creations of the imagination; in the general concept there is a departure from the concrete facts of which it is supposed to be cognitive, and therefore one of the first conditions of truth-getting is neglected. It has, therefore, still to be decided how sympathy is to be employed that the ideal of knowledge may be reached. And since it

is science that has shown such zeal in its effort to reach facts, and since a certain kind of success, so far as the scrutiny of sense-data is concerned, must be conceded to it, the problem before us may be described as the synthesis of the method of science with the method of sympathetic imitation. It is still the knowledge that the self has of other persons and things, and of its own non-immediate experience, which is being studied.

2. Let the psychological process found in sympathetic imitation be recalled. A man sees the contortions of his neighbour's countenance, and feels the pain which his neighbour is suffering. Here there is direct observation by means of the senses, and then with the sensations received there is associated a feeling or experience which is not directly observed. There is, therefore, necessary, first of all, exact observation of sense-data. These phenomena, to call them such, are not, it is true, the ultimate reality: the sign and its interpretation are not to be confounded. Yet the sign is what is immediately given us, and only through it can the interpretation be reached; hence the careful study to which it must be subjected. And all is necessary that science has done to make more minute its observ[illegible]te one object from an[illegible] carried

to too great fineness; for any part may prove instinct with new meaning: it may be a seal the breaking of which opens another book.

3. Not only must the phenomena presented to the senses be observed as separate and isolated facts, their relations must be perceived. Each has a definite place in a system, and its environment must be studied. The individual letter may by itself be meaningless, and may gain meaning only as part of a word; the word may not be truly intelligible apart from its context. The various symptoms of a man's pain may have to be noted and taken together that its peculiar quality may be apprehended. The coexistences of phenomena must therefore be made clear. Moreover, there are certain coexistences which always recur. It is of great moment to discover them that we may make right interpretations of the nature of things with greater expedition; just as it helps in the reading of the printed page to know that certain syllables and words always accompany certain others.

Not only the coexistences of phenomena, but also their sequences, must be detected. The meaning of each moment is something that exists in and for itself: the present is distinct from the past, and is lost when the future arrives. Yet it expedites the process of interpretation to know

that phenomena come in a certain order. Hence the importance of discovering the causal relations of things. There still remains the task of associating with each part of the phenomenal series its true meaning; that is, there is still required the sympathetic function. But that the fulfilling of that function may be facilitated, it is desirable to know the order in which the phenomena to be interpreted present themselves.

The statement that the coexistences and sequences of phenomena are of a universal character, is the presentation of the true meaning of the doctrine of concepts. For what the concept really indicates is such constant coexistence and succession. And this view is not affected if we regard the concept as superseded by the "law." The empiricist and positivist are right when they maintain that all the facts which science considers can be presented in terms of coexistence and succession. We must, therefore, use the method of concepts, but we must at the same time give this interpretation to the concept.

4. But the question may be asked, are not space and time, which are implied in all statements of coexist[redacted] . thus made metaphysical regarded, and so far l claims, the

criticisms already passed on them still hold. Yet they may be regarded in another light. For convenience in discussing this question, let space be considered apart from the more complex idea of time. Space is an empirical concept with certain peculiarities. It is derived from universal experience. It is not, like substance or cause, applied universally, though having nothing in its origin to justify this universality: it can claim that its source is all experience. Moreover, it is experience with that which is the particular quality of each part of it ignored; space is experience with its content reduced to indifference, so that it seems to be the frame or form of experience. And thus, while space is not the *a priori* form of experience, but is the empirical form of it, it is yet not the less fitted to represent the relations of all phenomena.

Thus, while space may not be a metaphysical entity, it may be entitled to the place it occupies in science, and the effort to make science mathematical may be justified.

5. The spatial idea, as thus applied to things, may be said to have for thought a symbolic value. A symbol, as we see in its algebraic employment, may represent something which it does not in itself resemble. Thought may for the time oper-

ate with these symbols as if they were objective entities, and may construct from them a world of its own. Finally, however, it emerges from this series of operations, and finds itself at home with the particular reality, which, indeed, from the beginning it was its aim to reach. The spatial representation of things, the whole mathematical treatment of them, is of this symbolic character. The spatial relation does not represent the actual relation subsisting among the experiences, so to speak, of the world; nor does it represent a relation among the sensations which fill human consciousness: it is their product, other than they, and external to them. Yet it is a symbolism which thought uses; and we have seen that for knowledge the statement of spatial relations is indispensable.

The time relation may likewise be employed without any concession of its claims to metaphysical existence. It is still more obvious in the case of time than in the case of space that the statement of its relations has only a symbolic value, when there is borne in mind the peculiar origin of the time idea as a combination of space with other feelings such as [redacted] v. Thus, the element of s [redacted] in certain concepts, e [redacted] a purely

symbolic device which need not be regarded as resembling anything in the world which it is used to unravel.

6. The other categories, such as reality, substance, and cause, or energy, fail to furnish the metaphysical interpretation of phenomena; and, at the same time, they seem to present something other than relations of sequence and coexistence among the phenomena to which they are applied; so that it might seem necessary to reject them as altogether worthless. Yet probably science cannot afford to dismiss them altogether from its employment. They also have a symbolic value of their own.

7. Reality is the symbol of knowledge as opposed to imagination. Imagination creates ideas which, when recognized as such creations, are contrasted with the facts with which knowledge deals. Out of the many phenomena presented to the mind some are chosen for knowledge; others are rejected; those that belong to knowledge are marked by the symbol reality. This symbol must not be taken for a knowledge of the objects in question, but for a sign that they are matter for science. Originally betokening the concentration of the mind upon that which is in contact with the body, it has now a wider application, and, though retaining its original meaning, associates itself with what-

ever is to be taken seriously. This association, like others, may often be mistaken, but what it concerns us here to note is that, only when it takes place, is a phenomenon taken seriously. When there is this association with any phenomenon, it is then matter for science, with all the methods at its command, to study.

It need not be said that the illusion or the fancy may, as much as anything else, become an object of science. When it is said that the illusion is unreal, it is meant that it is such in contrast with mental states which may refer to things beyond the individual mind. At the same time it may be studied as a mental phenomenon, and, looked at from this point of view, it associates to itself the category of reality.

Mr. Bradley has defined judgment as the reference of an idea to reality. This definition is very valuable, yet it is important to carry psychological analysis further. In the judgment there is an association of two relatively distinct ideas; or there is the referring of one idea to another. The idea, however, to which the other is referred is never simple: it has always the idea of reality associated with it. It may, indeed, be a very complex idea, the product of many judgments whose predicates have [illegible] together; it may also be

an abstract concept: in any case, it is taken as a form of reality. Nor is this idea of reality ultimately wanting to the predicate. The predicate gives what constitutes, in whole, or in part, the being of the subject. The copula indicates that the predicate is the reality of the subject. It is thus evident that our knowing and thinking are concerned only with that with which we have first associated the idea of reality. The importance of this symbol can be seen to be great. Nevertheless, that it is a symbol must not be forgotten.

8. Substance, likewise, is a useful scientific symbol. It may not be entitled to indicate in animistic fashion the inner self of objects: it serves, however, to indicate the relative permanence of certain coexistences in contrast with other coexistences which are accidental and for a moment. A table is a substance; that is, the qualities of shape and solidity and utility are associated in a greater or less permanency. On the other hand, the books laid on the table do not form one substance with it. At the same time, the relativity of this permanence is such that the term substance has no very precise definition. While it is a useful expression, it is not exact. Even in the case of a coexistence which may be regarded as "absolute," the term substance, if used, does not of itself denote

the necessity which is supposed to be embodied in the coexistence.

9. Causality has its value in indicating the order which phenomena observe. Apart from human experience there may be nothing corresponding to that feeling of effort of which it is a modification. Yet it serves to distinguish the sequences which are invariable from those which are accidental.

10. Likewise the principles of the conservation and transformation of energy may have no value as attempts to disclose the reality of nature; but they may yet be taken to indicate certain characteristics of the relations of succession and coexistence among phenomena. They teach that a certain series of phenomena can, in thinkable conditions, be given in reverse order: *a* is followed by *b*, but in certain other conditions *b* is followed by *a*.

11. The category of essence being a feeling that associates itself with a given permanent quality, or with several such qualities, may still serve as the symbol of this kind of permanence. The category of similarity does not resemble the objects to which it is applied: it is a symbol of a group of objects which may be described as being such that knowledge of one facilitates, or, within certain limits, stand[illegible]wledge of the others. From the a[illegible] the category of

teleology it can readily be seen that it is only a symbol of a certain species of succession.

12. We have thus seen that concepts and laws resolve themselves into relations of coexistence and succession. We have found that these relations have merely a symbolic value. We have also found that the other so-called categories are of a symbolic character, having, for the most part, the power to indicate special forms of coexistence and succession, and thus being symbols of symbols.

13. Not only must the symbolic character of laws be recognized; the sense in which they are universal must be understood. Many laws (*e.g.* chemical principles) without doubt represent averages. *They state what is valid within certain limits of difference.* The individual beings within these limits may vary widely, yet they coexist with, or are followed by, certain other things. The subject of a universal proposition can probably be taken to refer to exactly similar things only when these are the points of which, as centres of energy, the universe might be regarded as made up, or are still more hypothetical existences. The so-called molecules may be supposed to vary in form, and the manifestations of energy in intensity, to an indefinite degree. It may be that every individual thing is unique. While the law

of gravitation holds of every particle of matter in the universe, it is probably true that no two pulls of gravitating bodies are exactly alike. Thus the law has limits like those of the crude concept. Now, it is the nature of concrete individuals that must be studied. The concrete is the real, and it is the form of each actual concrete thing that must be observed. Laws may be useful in various ways: they are helpful to knowledge as they lead us nearer things. They present the coexistences and sequences which obtain among things so long as these things keep within certain limits of difference. It is in this way that they help us to a presentation of the actual forms of things.

14. With this scientific study of the appearance which things present there must, let it be repeated, be conjoined the method of sympathetic imitation to reach that which cannot become appearance. The phenomenon must be studied, in order that that of which it is the phenomenon may be revealed. As a man studies the face of another that he may have sympathy, so it must always be in the cognition of things. The contemplation of the outward appearance of things must be followed by the sympathetic acquaintance with their heart. There must be this syn-

thesis of the methods that the ideal of knowledge may be reached. The sympathy which finds such striking illustration in the artist and the moralist must be joined to the love of observation for its own sake, and the fidelity in the search for facts, which characterize science.

15. In view of this problem of the synthesis of the methods, it is instructive to recall the theory of knowledge which Kant propounded. According to him, all the material of knowledge is given by the sensibility: it consists of the sights, touches, and other sensations of the external senses, and the data of the somewhat indeterminate "internal" sense. The sensibility has two *a priori* forms, space and time, in which all sensations are received. Kant's account of them should be carefully noted. He is at pains to maintain that they are not concepts, but intuitions, his reason being that they contain a manifold; they are the *a priori* forms of the multiplicity of sensations.

It is not less important to notice the function which Kant assigns to thought in its operations upon this material. To think is to judge, and to judge is to bring a manifold under a conception: it is in this connection that Kant enumerates his root conceptions or categories. These conceptions

do not reveal the constitution of things in themselves. It is their function as the root conceptions of thought to introduce unity into sense-experience. "I think" is the original synthetical unity: to say that the "I think" unifies is to state an analytical proposition. For instance, the category of causality has its significance in the presentation of the succession of phenomena. The phenomenon *a* is conjoined with the succeeding phenomenon *b* in a causal relation when *a* conditions *b*, or determines the possibility of its existence. Not that hereby the nature of things in themselves is in any way revealed. Causality is simply a rule superimposed upon phenomena, which apart from it cannot be seen to have any necessary connection; and its peculiar quality as a principle of synthesis is derived from the application to special time relations of the synthetical unity of apperception.

16. Kant's doctrine of knowledge is remarkable for the account which it gives of the actual attainment of science: science deals with phenomena; that is, it gives an account of the relations, spatial and temporal, which obtain among sensations.

17. Yet Kant is not entitled to restrict thought to the presentation of such relations, for thought can reach better results than those which science has actually to show. To go to the heart of his

theory, he is not entitled to regard thought as synthesis. Indeed, it may be gravely questioned whether he has been able to develop this view of thought with consistency. It is difficult to interpret his categories and principles of judgment as having reference only to conjunction of sensations: they refer to something which is indicated by sensation, but which, at the same time, transcends sensation. When he gives as the first analogy the principle, that in all changes of phenomena the substance is permanent, and its quantum is neither increased nor diminished in nature, we seem to have, in the very statement of it, the traditional contrast between the changing sense-phenomenon and a metaphysical entity. Besides, Kant has not, in his exposition of the principle, been at pains to show that he means that in some sense the amount of sensation in the universe remains constant. Causality can be more easily regarded as a mere principle of synthesis among sensations, yet Kant, at least, in the second edition of the *Critique*, has connected the relation of cause and effect with the successive changes in substance, and thereby again transcended phenomena. Kant falls into this contradiction, because substance and causality are not merely syntheses: they are principles of interpretation, and transcend phenomena.

It is only by a rejection of the natural meaning of the categories that they are regarded as syntheses. Kant did not acknowledge that he was diverting the categories from their original use, and hence he relapses unconsciously into the original method of employing them. And, in truth, thought is not merely synthesis; it is interpretation. There is, to use the metaphor of synthesis, a joining of two ideas in the judgment, as there may be in other conscious states; but it is characteristic of the judgment, as we have seen, that the predicate expresses the being or truth of the subject. Even spatial and temporal relations are to be taken objectively, when they are predicated in a judgment; if we come to recognize that they are merely symbolic of something, this recognition is, in turn, a judgment of interpretation of which they are the subjects.

18. At the same time, Kant has hints of a view of knowledge as something which is not merely a synthesis of phenomena. The realm of things in themselves is not entirely unapproachable, for freedom, immortality, and the existence of God are found to be postulates of the moral nature. And even if this metaphysic should seem somewhat crudely formulated, Kant has other suggestions toward a knowledge of absolute reality. He ex-

plains our inability to know things in themselves by the character of our human means of cognition: everything which belongs to intuition contains nothing but mere relations, and the whole of our cognition, which is a cognition of places, change of places, and laws, contains nothing but mere relations: yet by mere relations a thing can never be known.[1] Contrasted, however, with this knowledge is that of an intuitive understanding, such as belongs to the Divine Being, and knows things in themselves. The idea is merely problematical, but is not contradictory. Kant has given the most detailed presentation of this conception in the *Critique of Judgment*, in a discussion of the adaptation of nature to our demand for unity in knowledge. Kant tries to show that the need for regarding such adaptation as designed is due to the peculiarity of our understandings, which must proceed from the connection of parts to the representation of the whole. In contrast with our understanding we may conceive one which would proceed from the intuition of a whole to the parts. Kant seems to be thinking of universals, and even to be anticipating the system of absolute idealism. But, in so far as he inter-

[1] *Kritik der reinen Vernunft*, Transc. Elementarlehre, Erster Theil, § 9.

prets this intelligence in terms of concepts, he is attributing to it the limitations of the discursive understanding. May we not say that the function of the intuitive understanding is more nearly supplied by the faculty of sympathy? Sympathy is understanding, inasmuch as it not merely is knowledge of the appearance of things, but transcends phenomena. At the same time, it is intuitive, and not discursive; it is directly perceptive of reality; the veil of sensations and categories is rent. True, Kant regards this intuition as possible only for the Divine Being, in whom it is such as to give the existence of that which is its object, and thus it means the divine living of the world rather than a knowledge of it. Sympathy, on the other hand, is not creative, but is knowledge of a created object. Yet, while this is to be admitted, it is true that sympathy, in contrast with categories, gives knowledge of the object in terms of that divine living which is the reality; it intuites that which God intuites.

19. It may seem that we have made an unjustified assumption in supposing that such knowledge as we get by sympathy is knowledge of the "thing in itself," asserted so strenuously to be unknowable. This question as to [illegible] solutely unknowable entities [illegible] It

must, however, be pointed out here that an account of the sympathetic faculty involves precisely this distinction between phenomena and things in themselves, though it indicates that the thing in itself is knowable. An illustration may be proof of this. The wounded man's pain is known to his neighbour by certain signs, such as groans, and contortions of the countenance. These are phenomena of the pain. They are not the pain itself, and bear no resemblance to it. Nor can the observer by much searching among phenomena come directly to the pain. He might even examine the man's brain, but the conscious experience of the pain, while it might be indicated by new signs, would still not be directly brought to light. But were it possible by other methods to know the pain, the observer of it would then be acquainted with the thing in itself. Thus, at the risk of paradox, it must be maintained that such a mental state as a sensation is at once a phenomenon and a thing in itself. The individual A has sensations from B; that is, in presence of B he has certain mental states. These do not resemble B necessarily; they are simply A's conscious states. But they may be taken for signs of B; or, in technical language, they are the appearance or the phenomena of B. But suppose that some one now attempts to know A; he finds him made up

largely, at least, of such states as these which we have called phenomena of B. A *is* these phenomena. But A is real; he is a thing in itself. *Thus the states, which are from one point of view merely phenomena, are from another point of view things in themselves.* There may or may not be things absolutely inaccessible to us. Apart from that question, the distinction between phenomena and things in themselves is valid. And when the object of our knowledge is the thing in itself, as it is when we seek to know other things, it may be legitimate to treat sense-data by the method that Kant prescribed, while for the knowledge of the thing in itself a distinct method may be employed.

20. The problem of the synthesis of methods may be looked at from another point of view; the history of intellect may be considered. In an earlier chapter, we saw that sensations are originally to be described simply as states of consciousness, with no necessary cognitive or teleological function; we also saw that, in the period of sifting known as evolution, those minds are selected by nature which develop certain sensations, and certain modes of relating sensations. It was also found later that the mind had a faculty for making general concepts from the materials of sensation. This faculty is of importance in the struggle for existence; in the

business of life it is a great advantage to be able to abstract qualities, and to associate those which have been often found together. It is important, when the man sees a bear, that, though he has never seen this particular bear before, he should associate with the visual image of its form the idea of its ferocity; or, when he sees a fruit, that he should at once think of its edibility. It is not necessary to assert that the survival of the concept is due entirely to its utility; it may have been a necessary product of the faculties of memory and association; yet, doubtless, its vitality is due in some measure to its utility.

Another period came when the mental states of the individual were employed to reflect or copy the being or essence of other things. And for this purpose concepts have been the chief resource. But the failure of the concept has become manifest; the concrete must mirror the concrete. The concept, however, need not be utterly discarded; it must simply be relegated to *its original function;* it must furnish a more or less exact statement of the relations of coexistence and succession that obtain among phenomena.

21. It is specially important to consider this problem of the synthesis of methods in connection with the doctrine of the correlation of mind and brain. It is probably to man's nature that we

should turn for the key to the riddle of the universe. It will be seen, as we proceed, that we are only making more definite the meaning of the illustrations already given of human sympathy.

22. One of the most confidently accepted beliefs of modern psychology is that of the correlation of mind and brain. It is the object of physiological psychology to state all the data of psychology in terms of nerve-movements. Our thoughts, our volitions, our feelings, are taken to represent so many movements of nerve-molecules; not an image can float before the fancy, not a prayer can shape itself for utterance, without the agitation of a portion of the brain. The statement of conscious facts in physiological terms may not be complete; but the want of completeness is due, it is believed, not to any interruption of this correlation, but to the coarseness of the methods of observation, or to some more or less accidental obstacle. While absolute proof of the theory cannot be given, there is a great and increasing mass of evidence in its favor.

It is common to say that the series of brain-processes is parallel to the series of mind-processes; or, at least, the mental has always a corresponding material activity, though the material may not always have a mental counterpart. They are also often regarded as parallel in the sense that they do

not affect each other. They are as if belonging to two kinds of existence, and cannot affect each other. The body does not act upon the mind, and the mind does not control the body.

23. Whatever may be the ultimate interpretation of the facts on which the theory of parallelism is based, it serves to bring into clearness the distinction between the physical and psychical series as data for knowledge. For the observer, they are so distinct in quality that they are taken for separate orders of existence. Yet it does not need much reflection to show that the difference is within the sphere of knowledge. After all, what is called the material series is a series of mental facts: it consists of the conscious states of the observer. It is, primarily, at least, a series of sensations; other ideas, such as substance and cause, may be added, but the basis for them is sensation. The observation of the brain means, thus, a series of sensations, visual or tactile for the most part, in the mind of the observer; they are perceived immediately, or an inference is made from those so perceived to others which in themselves admit of the same immediate perception.

The psychical series, when the observer is looking at another person, is not known in this immediate way. The observer infers its existence: and he

infers it, for it is something which he can never immediately perceive. His knowledge of the material series consists in his own sensations; his knowledge of the psychical series consists of inferred states which can never be known directly. It is putting the same truth in another way to say that in the study of the material series he never comes on any fact of the psychical series; no scrutiny of the cells of the brain discloses to him at any point an emotion of love or hatred, or a feeling of pleasure or pain. The psychical series is a thing in itself, and he may extend his knowledge of the phenomenal series indefinitely without coming nearer that reality.

24. Nothing has been said of a possible matter which may present itself in connection with these two series of facts. We are not directly concerned with it. And, in truth, the temptation is great to adopt the theory that we have in the material and psychical series two aspects of one reality. Viewed from without, the series is said to present itself as material; viewed from within, it is mental. Professor Royce illustrates the theory in this graphic way: "Here in my world of daily experience is my friend. If one saw him through and through, one would experience as the describable physical facts about him—a quivering mass of molecules. Especially complex with in-

tertwined spirals and streams of multitudinous molecules would be each of the many tens of millions of cells of his brain. Thus my friend might be found. Nay, I have as yet found him not at all. I did not mean this maze of molecules by my friend. I meant his intelligence."[1] The physical appearance is "simply the way in which the true and spiritual self must needs appear when viewed by a finite being whose consciousness experiences in the forms of our space and our time."[2] If we add that the physical appearance owes its peculiarity, not merely to the observer's forms of space and time, but to the fact that it is the observer's series of sensations, the theory seems simple and reasonable. Yet, as has been indicated, it does not concern us here to prove such a theory, or to refute the dogma of the independent existence of matter. It is enough to show the character of the two series with which we are directly concerned.[3]

[1] *The Spirit of Modern Philosophy*, pp. 405 f.

[2] *Ibid.*, p. 411.

[3] Avenarius argues strenuously against "*Introjektion*," and the distinction of "outer" and "inner" (*Der menschliche Weltbegriff*). His criticisms are important: certain forms of *Introjektion* are crude. Yet it is necessary to insist that the experience of a man, A, does not become the experience of his neighbour, B, who observes him in the sense in which B realizes the *effects* of A's experience in his own. These effects, to repeat, are B's immediate, private sen-

25. If, then, we have the two series of facts, the sensations of the observer of the brain and the psychic experiences of the person observed, the question arises, what does knowledge of the person observed imply? Since every conscious experience in the object of observation has its physical counterpart, and since it can be known only by inference from its physical counterpart, the physical must be carefully studied. Its appearance must be noted, and sequences and coexistences must be sought among the relations which it exhibits; it must be studied according to the methods of positive science. In all this, it need not be repeated, the observer is dealing with his own sense-impressions, which bear no necessary likeness to the facts in the experience which he wishes to know. How is he to pass to these objective facts? By the method of sympathetic imitation: he must associate with each phenomenon that experience of which it is the sign, and he must realize it as it actually exists.

26. It might naturally be objected at this point, that a knowledge of these objective psychic experiences need not call for the exercise of sym-

sations; the experience of A is inferred. In presence of this kind of "dualism," the problem before us is to determine how these inferred states can be truly known.

pathy. Is not, it may be asked, the science of psychology proof that these objective experiences can be immediately intuited, and that the knowledge of them can take the forms of science? It may be well, in view of such a question, to state more explicitly what has already been indicated, that psychology is not knowledge. Psychology, like other sciences, seeks for laws or statements of co-existence and succession. The relations which it thus presents do not resemble the conscious experiences which they are supposed to represent. It has often been remarked that psychological analysis destroys the capacity for the feeling that is studied: it is a curious illustration of the breach in this sphere between what is called knowledge and its object. It is, of course, true that psychology has its value, just as the scientific presentation of any set of facts has its value; but when we wish to know any individual conscious experience in its truth, we must use, not the method of psychology, but the method of sympathetic imitation.

We have, then, in this study of the relations of mind and brain, an important illustration of the synthesis of the methods. The illustration is of special significance, for the relations are among the most important facts to which the methods can be

applied; moreover, when man "knows himself" he will be on the way to a knowledge of nature.

27. Before this investigation into the function of each method of knowledge is concluded, there is a question of vital importance to be considered. The attempt has been made in this criticism of categories to discredit them as cognitive factors. But, nevertheless, they seem essential to the application of the method of sympathetic imitation. They seem to be not merely instruments to be used for a truer kind of cognition than they in themselves afford, but to be inseparable elements of the cognition for which the claim of truth is here made. Thus, it is said that the man who knows another by sympathy has a conscious experience like the experience of that other. Here the category of quantity is employed: the subject and object are numerically distinct. The category of similarity is also employed. Would not the sympathy collapse were these categories denied it? It may further be objected that we cannot reason without the categories: the attempt to overthrow them is made in the strength of them.

It is true that, in the exercise of sympathy, use is made of the categories. Yet it does not follow that they enter into that which is the peculiar act of sympathy. Rather must it [illegible] that

act they are irrelevant. They may precede, or follow, or even accompany, the sympathy; but they are present as reflections on it and the conditions in which it occurs; they are present as integral parts of it only in those special cases in which they appear, not as universals, but as mental facts among other mental facts. Thus, when we turn to consider the sympathy, and say that in it there is one mental experience similar to another mental experience, we are treating it according to scientific methods. It can readily be seen that our every-day reflections on it belong to the same order of thought. But such categories as similarity and number do not represent, save in a symbolic way, objective relations. Sympathy transcends categories. It cannot be described in terms of them. The truth which it gives can be described only in *its* terms. We must not confound the account of sympathy which psychology gives with the truth which the act of sympathy gives.

Again, it is true that we use the categories for their overthrow. Yet this may be a legitimate process. While concepts and categories are useful for all reasoning, they are useful as algebra is useful. When we finally compare the algebraic symbols and processes with the realities for which they stand, their symbolic character is apparent.

So, while concepts are serviceable, it is yet found when they are compared with the reality, that they are not the counterpart of that reality. It may be extremely convenient to count things, yet it does not follow that number is an objective entity. It may also be convenient to say that one thing is like another, though one might refuse to believe that likeness, as we think it, is something subsisting objectively as a relation between things. So concepts may by their usefulness in reasoning conduct us to a view of things by which it is seen that they are not the counterpart of reality.

28. We can conceive, as Kant says, an intelligence for which concepts are not necessary: the whole universe is present to it as it actually is in its concreteness. For us concepts are necessary because of our finitude. We cannot have the totality of the universe present in one state of consciousness. We know fragments of the universe. Experience is narrow; and it comes to us as a stream. Therefore we require "discursive" concepts; in them we have threads to guide us among the multitude of phenomena which form the larger experience of the universe.

CHAPTER XI

THE LIMITS OF KNOWLEDGE

1. Is the method of knowledge which has been expounded an unfailing one? Is it, as a matter of fact, possible by its means to gain a knowledge even of our fellow-men? How much of the universe beyond man will become so friendly to us that it will tell us its secret? Is sympathy the magic by which man can understand, not only the song of the birds, but also the music of wind and waters, and can penetrate the mystery of sun, and stars, and those other material masses which have no speech nor language?

2. In the consideration of the limits of knowledge, it is important at the outset to deal with certain views of the possibility of knowledge. First of all, there is the view of idealists such as Hegel, who teaches that the mind possesses universals or categories, and that, therefore, since the world is made up of such universals, the mind has absolute knowledge. This theory of the place to be assigned to universals is not to be sustained. Their presence

in the mind is not knowledge of the Absolute, any more than the presence of any conscious state is such knowledge. They have their importance in relation to a mind which is incapable of universal knowledge. To an "intuitive understanding" they are particular mental states among other particular states. The possibility of a knowledge of the universe is, therefore, not to be demonstrated by the mind's possession of so-called universals.

3. But dogmatic agnosticism still more than absolute idealism has been characteristic of modern times. Agnostics maintain that, after all the possibilities of human knowledge have been exhausted, there must remain something absolutely unapproachable by the human faculties.

4. Kant's doctrine of an unknowable thing in itself was referred to in the preceding chapter. While it was shown that the distinction between phenomena and things in themselves is a legitimate one within the sphere of the knowable, the question was left unanswered, whether there may not be outside of the knowable an unknowable reality.

It is interesting to observe how Kant's view of knowledge as synthetic coheres with his agnosticism. Sense-data are furnished us, but it is not the function of thought or judgment to interpret them; it can only conjoin It is

only necessary to recall what has already been pointed out, that this is not a correct psychological account of the judgment; for, while the judgment is a synthesis of ideas, the predicate is not merely joined to the subject, but is given as its truth or meaning.

To estimate fully the value of Kant's agnosticism, it is important to see the root from which it springs. It seems to come from his treatment of the thing in itself. This thing is not a mere blank. It is a thing. It is, moreover, in some way the cause of phenomena, or their ground. Kant says that our intuition consists of the mode in which we are affected by objects; that is, the object acts upon the Ego, and starts the Ego's sensuous activity. It can thus be seen that the thing in itself has the marks of *substance*. It is only natural that Kant should add that this substrate of phenomena is unknowable. Not that Kant would allow the thing in itself to be named by the name substance; he expressly declares that it is not to be thought as substance. But when Kant makes this declaration his agnosticism tends to disappear. On the other hand, men are influenced by principles which, if recognized, would be repudiated by them; and when Kant speaks of the thing in itself as a real existence, he seems to have recourse to the familiar idea of substance.

The agnosticism of substance, however, is spurious; it is that of vagueness and lack of analysis. Substance is an image which lends itself less readily than some other images to the methods of scientific thinking. But there is ultimately nothing unknowable about it more than about other images. But, even if Kant has allowed the thing in itself to assume the characteristics of substance, are we therefore to deny that there is an unknowable something? Is Kant not justified in keeping in view a reality of whose inner being we can in no way form a conception? It is to be said in answer to this that the dogmatic form in which Kant presented his agnosticism must be renounced. When we speak of a "thing," even though we say it is unknowable, we are using a mental conception, and thus bringing it into the area of knowledge. The conception of substance, with all other similar conceptions, must be renounced, if the unknowability of things is to be maintained. For these are interpretative or imitative ideas, and to apply them is, at least, to claim knowledge. We cannot speak of unknowable things.

5. There are other representations of agnosticism, which demand consideration. Mr. Herbert Spencer has given a number of arguments to show that we cannot know the Absolute. He reasons

that such knowledge is for us unattainable, because in our knowledge subject and object are related to each other; it is impossible to know in such relations the absolute, which exists out of all relations. But, as we have seen, knowledge is not to be construed as a relation in which subject and object merely affect each other. It is the function of knowledge to equate itself with its object. As we have already seen, we may know a man as phenomenon, or we may know him as he is for himself. This life of his is a series of facts, and in knowing them as they are we have a knowledge of the absolute reality. It might be objected that subject and object are still kept distinct. To this it may be answered that, if they are distinct, they yet have this peculiar relation, that the states of the one form a copy of the states of the other. At the same time, it must be admitted that we cannot go beyond this principle in claiming knowledge of other things. For, while the temptation to resort, in the explanation of all knowledge, to the doctrine that subject and object are identical has presented itself to philosophers, we are not entitled to assert this identity of subject and object in the knowledge of one individual by another. Nor may we assert it, even though it is true that numerical distinctness is a symbolical idea.

Again, Mr. Spencer says that we cannot know the absolute because to know anything is to class it; thus the absolute, which cannot be put in a class, cannot be known. In a similar argument it is contended that, as we know things by stating relations of likeness, the absolute, as it cannot be said to be like anything, cannot be known. In regard to these arguments it may be pointed out that the real objection to the attempt to know by concepts is, that we cannot by this method know the absolute, unless the absolute is made of concepts. Mr. Spencer comes near a recognition of this fact when he finds further support for agnosticism in the essential nature of living organisms. Life is defined by him as the adjustment of internal relations to external relations. But, he proceeds, the perception of relations is not the perception of the things themselves. We need not accept his definition of life to acknowledge the value of this criticism of relations. But Mr. Spencer has not considered all the possible methods of knowledge.

It may be added that Mr. Spencer also is guilty of the fallacy of predicating various categories of the absolute which he has pronounced unknowable.

6. Another form of agnosticism, if it may be

so designated, is that presented by the positivist, who abstains from all dogma regarding metaphysical entities, and contents himself with simply considering phenomena as they can be stated in terms of coexistence and succession; that is, in terms of space and time. His procedure is right in so far as it keeps close to facts of experience; yet his fear of metaphysical entities might have led him to look with suspicion on space and time. Instead, he uses these concepts in such a dogmatic way that he feels absolved from the necessity of seeking for any truth beyond them; and thus they become a screen to hide from him the truths that are ready to disclose themselves.

7. A dogmatic agnosticism which declares that there is an absolute being beyond the reach of knowledge has been found to be unjustifiable. The agnosticism is also unjustifiable which simply renounces the right to go beyond phenomena. On the other hand, a certain form of agnosticism may be legitimate. If we restrict ourselves to phenomena, we may find that, while some can be interpreted, there are others which cannot be made to yield a meaning. The sense-datum is present, but what it signifies may be for the present unknowable. Dogmatism as to the knowability or unknowability of the universe

is out of place. The universe presents itself primarily as a universe of concrete phenomena; whether any one of these admits of interpretation, is to be determined by experience.

We are thus brought to the practical question, whether experience justifies the idea that the world may be known. Are there practical difficulties in the way of this knowledge? A long series of such presents itself.

8. The first to be noted is the consideration that any part of a whole is not, when taken by itself, the same as it is when regarded in view of the whole. A letter taken by itself has one appearance; it changes its looks when seen as part of a word; a word seems to change when it becomes part of a sentence. This earth, so big and important, becomes, from another point of view, a very small star in the multitude of the heavenly host. It may even be, some think, that evil, when seen in the light of the whole, will seem part of a greater good; the discords will seem to contribute to a finer music. Therefore, if the mind should think to enter into any experience by the exercise of sympathetic imitation, and thus to know it, it would find that it had been taking a part out of its relation to the whole: for an intelligence capable of taking into its grasp a mul-

titude of other facts, that original part would have a different character; and thus what seemed to be knowledge would, because of the finitude of the percipient, prove to be illusory.

There is a certain amount of truth in such statements. If two things are brought near each other, they suffer change. If the mind is occupied with one experience, and other ideas come in, there results a complex mental state in which all the parts are modified; and, if the first conscious state is an act of cognition, the coming in of other ideas will modify the cognition. But, on the other hand, it is to be remembered that the object to be known does not of necessity change: it exists as a definite fact, and it is to be known as it actually is. And this fact must be regarded as knowable in the sense that it can be reproduced. Theoretically speaking, a man can know his neighbour's experience. Now, should he, while he is reproducing his neighbour's experience, allow other ideas to enter his mind, such as thoughts of his neighbour's relations to his family and his country, his imitation or reproduction of the experience may be profoundly modified. But it would not thereby be brought nearer truth: the modification would make for falsehood. An infinite intuition, we may suppose, would realize the man's experience just as it is

realized by the man himself, and that realization would not be changed by the presence of other conscious experiences. While, therefore, the man's experience is influenced by everything in the universe, it is a concrete existence to be known in itself; and there is a sense in which that knowledge in the finite knower's mind is not improved, but spoiled, by the introduction of other ideas.

9. But further doubts must arise as to the possibility of reproducing in the consciousness of one individual the concrete experience of another. How is it possible for a man to know another individual, since in the contemplation of that other he gets only his own experiences? If he has sensations of sight and sound and touch which render him aware, on the ordinary interpretation of them, of the other's existence, he has yet in these sensations only his own conscious states. Moreover, if he exercises his imitative faculty, and enters into sympathy with another, he has still, in what seems to be a sympathetic copy of the other's experience, only his own conscious states. The individual cannot step out of himself; and the limits of his individuality seem to render futile his efforts after knowledge. It brings the difficulty into yet clearer light if it is asked, whether the individual is entitled to say that there are other individuals besides

himself, since for him they are simply states of his own consciousness.

The last question may be referred to first, yet need not detain us. It must be admitted that, so soon as the individual attempts to pass beyond his own states, he is in the realm of the hypothetical. He knows that other individuals like himself exist, only by a process of association and inference; and this process can make no claim to be infallible.

It must further be admitted that the individual's cognition of another consists of his own states. But let it not be concluded from this that all his mental states are equally without value as instruments of cognition. Some of them bear no resemblance to the experience which is the object of contemplation, while others are copies or reproductions of it. It is a matter of great moment to gain this resemblance, even though the original and its copy remain distinct entities.

10. But the practical difficulties in the way of knowledge are not yet finally disposed of. Preliminary to sympathetic imitation of an object there must be, as we have seen, perception of its phenomenal aspects. But to know anything in its phenomenal aspects is a task of unlimited magnitude. The knowledge of its constitution increases in minuteness of analysis, until there is suggested

an illimitable amount of detail, beyond all the power of the mind to conceive. Let the conscious experience of an individual man be the object of investigation. We look first on his outward appearance; but how deceptive this appearance is, there is little need to demonstrate. We must penetrate beyond skin and nerve-fibre to the cells of the brain: could we understand the phenomena of the brain, and reach their mental correlates, we should perceive what the man is. But what a task is thus set! Even were the difficulties in the way of seeing the brain overcome, it seems impossible to embrace in one intuition the details to be observed. The nerve-cells are counted by millions; they enter into endlessly varied combinations; many of them must coöperate to one result. But, further, the cell is not simple: it has a complex molecular constitution. And since the quality of the mental experience changes with the condition of the nerve-cells, their state of nutrition, and the extent and source of their agitation, it is necessary to have in view this molecular constitution and the changes that it undergoes when exposed to various influences. It can thus be seen that the problem, even in its simpler forms, is one of infinite complexity.

There is the same difficulty when the individual wishes to know his own past. It is clear that, to

have the same experience, he must restore his brain to the condition in which it was when he originally had the experience. To do this, he has a task of inconceivable delicacy. That it is hard for the memory even to approximate to the truth, is shown by the illusions that beset it. The pictures of memory, as Wordsworth observes, have fairer hues than belonged to the original experience; the spectres it hides become more awful. A man's autobiography is *Wahrheit;* it is, at the same time, *Dichtung.*

It is impossible to deal with this difficulty in a completely satisfactory way, since some of the problems involved must be left indeterminate. While it is possible to carry analysis to infinity, it is not decided how this analysis bears upon the conscious correlate. It is interesting in this connection to notice the problem raised by Weber's law. It is not, according to this law, every addition to the stimulus that produces a perceptible difference in the sensation. This may mean that there may be an addition to the stimulus, while yet the sensation remains utterly unchanged; or it may mean that there actually is a change, which yet is not sufficient to call up and associate with itself the gross idea of difference. On the former view of its meaning the task of interpreting the brain might seem in a measure simplified; for, whatever may be decided

as to the ultimate correlation of the physical and psychical series, it would yet be maintained that, for our human psychical experience, variations within limits of considerable extent in the physical series would have no corresponding variation in the psychical series; on the latter view, there would be no such simplification; and, moreover, the task of determining the mental correlate would be one of much greater complexity, inasmuch as we would be unable to apply the familiar symbol of difference to those variations which really existed, but were not such as to elicit this category.

Yet, while it must be acknowledged that there are very great difficulties in the way of applying the method of sympathetic imitation, it should be observed that large part of the difficulty must be felt equally by science. For large part of the difficulty is in determining the phenomenal aspect of things. Science claims that it is dealing with facts. But, to give facts, it must not be content to furnish general laws. It must present the concrete facts in their concrete details. If the labour seems infinite, it is at such cost that we are to know "facts." The problem, therefore, of becoming acquainted with the phenomena of a brain, in their complexity of actual condition and variation, is one which must be faced by the physiologist.

11. It must be said, finally, that it is necessary to distinguish between a method and its perfect application. The method of truth may be known, though perfect truth may not be reached. To the acknowledgment that truth is still an ideal, all advocacy of whatever method must probably come. Knowledge or truth may be what Kant called a regulative idea. Yet, nevertheless, it is essential to know the right method of truth-seeking. And we have seen that on the way of abstractions we are going from knowledge, whereas on the way of sympathetic imitation we are approaching it. And, moreover, there is a sense in which we enjoy knowledge, even though full fruition is not ours. If knowledge is a copying of the reality, the copy does not altogether lose its value because it is imperfect. And especially is he who draws the outline of the object he is set to copy as it actually presents itself to be considered near the truth, rather than he who thinks to present it by a series of signs, such as the arbitrary symbols of algebra. By the one method of knowledge we approach the abodes of the living; and though we may never completely know them, we are in their presence, and feel the glow of their life; by the other we are led away to what is illusory and unreal — to the realm of phantasms.

12. We are now in a position to determine in a

general way, how far the method may be applied to the various orders of being. A man can sympathize most completely with his fellow-men; and, in the circle of humanity, most completely with those of his own household, and his own age and interests. The youth does not sympathize with the old man; and the old man has difficulty in sympathizing with the child. The Anglo-Saxon is little able to understand the Oriental races. The more diverse the physical and mental character, the less possible is that common life in which sympathy consists.

This diversity is still more evident, and the barriers to sympathy are seen to be greater, when we compare man with the lower animals. It is interesting to observe the claim of Keats that the poet is able to overpass this barrier. He says that the poet is not only a man "who with a man is an equal," but is also a man

> "Who with a bird,
> Wren or eagle, finds his way to
> All its instincts; he hath heard
> The lion's roaring, and can tell
> What his horny throat expresseth,
> And to him the tiger's yell
> Comes articulate, and presseth
> On his ear like mother tongue."

It is evident that poetry, through one of its most poetical representatives, claims to have, in the case

of the lower animals, that knowledge which has been called true knowledge, and for illustration of which we have turned chiefly to the relations of human beings. And it is further to be said that there is no theoretical impossibility in such an extension of sympathetic knowledge as that spoken of. The animals are our kindred, and there are many parts of our experiences which probably resemble theirs, even as the human nervous system bears so striking a resemblance to theirs. It is, however, to be noticed that Keats takes his illustrations from the higher animals; the bird and the feline belong to the vertebrates, to which division of the animal kingdom man also belongs. When we descend to animals whose organs of sense differ widely from ours, we may well feel that they have sense-experiences to which we are strangers. It seems necessary, before the questions raised can be answered, that there should be an extension of the sciences of comparative anatomy and comparative physiology. It is surely by a comparison of the structure of the bodies, and especially of the nervous systems, of man and the other animals, that we shall come to a comparison of their conscious lives.

13. Another problem that may be referred to here concerns our knowledge of our own bodies. The greater part of the body is, in its absolute being,

utterly unknown to us. Consciousness is associated with a part of the nervous system. If our sentience constitutes the inner being of this portion of the nervous system, as some think, we may be said to know it in its truth; but the rest of the body remains strange to us. It works for us, but keeps its secret. It may be, indeed, that every cell in the body has a sentient life of its own. Such a hypothesis is to be tested by finding the molecular constitution of the nerve-cells which is the correlate of sentience; and while its absence would not prove conclusively the absence of consciousness, its presence in other parts of the body would be strong evidence in support of the view that they are sentient. Were the existence of such sentience regarded as probable, it would remain to be asked, how far it could be rendered in terms of our conscious life; that is, how far it could be known by us.

14. The inorganic world seems, at first, a sealed book. Sun and star, mountain and sea, — the mystery of their being seems hopelessly dark. Yet the theory that matter is not dead, but sentient, is one which has often been held. It was the view of Leibnitz that matter, while having an independent existence, is constituted by thought, albeit thought in a swoon-like condition. Clifford thought of the

universe as made of mind-dust. Professor Paulsen[1] writes thus: "Ultimately the same forces act in inorganic as well as in organic bodies, only in the latter they appear in extremely peculiar and intricate combinations. . . . When the excitation of the auditory nerve causes an animal to start up, the act is as much the mechanical effect of purely physical causes as when a billiard ball in motion sets another in motion by impact. If, now, the movements are accompanied by sensations in the one case, no reason can be seen why they should not be in the other." Again:[2] "The corporeal world is phenomenal; that which appears in it is something akin to our own inner life." Poetry also has lent its sanction to this interpretation of inorganic nature. The lyrics in which nature is called upon to weep or to rejoice may only in an indirect way express this view of nature; but there is other poetry which is inspired by the intuition of a spiritual essence in nature. Wordsworth, the great nature-poet, has made it his song that: —

> "To every form of being is assigned
> An *active* principle: — howe'er removed
> From sense and observation, it subsists
> In all things, in all natures, in the stars

[1] *Introduction to Philosophy*, translated by F. Thilly, p. 104.
[2] *Ibid.*, p. 111.

Of azure heaven, the unenduring clouds,
In flower and tree, in every pebbly stone
That paves the brooks, the stationary rocks,
The moving waters, and the invisible air . . .
Spirit that knows no insulated spot,
No chasm, no solitude; from link to link
It circulates, the Soul of all the worlds."

It must be acknowledged that all this is stated in language that is of the most general, or even vague, kind. Yet it suggests the possibility that some day the vague and general may give place to what is more definite. But much labour of observation and comparison must be accomplished before men can read the book of inorganic nature.

15. We have found that knowledge of other things is confined at present within narrow limits. It may be that it will always be limited as it is now. Yet it is also to be remembered that, if men desire to exercise the faculty of sympathy, they will find the power to do so increasing. In the evolution of the individual, and in the evolution of the race, faculties develop according to the premium set upon them. This principle bears more or less directly on the development of imitation and sympathy. Yet to say how far the evolution will reach, is at present impossible.

CHAPTER XII

SELF-CONSCIOUSNESS

1. There is now to be considered the problem, which has been so long awaiting us, of the knowledge which the self has of itself. The exposition of the method of knowledge that has been advocated has had reference to the knowledge by an individual of other individuals. This method might, indeed, be applied also in the effort which the individual makes to gain knowledge of his past: that past which has become separated from him must, to be known, be reproduced as it was actually at first experienced, and may thus be said to be known in a sympathetic way. But there is a knowledge which the self has of itself in every conscious state, and the nature of this self-knowledge must be determined.

2. It may be said that there is in self-consciousness the distinction of the self from the not-self, and that there is a cognition of the self through this idea of it as a particular entity. In view of such opinions, it is necessary to consider the

place of this self-idea and its significance when it occurs. An analysis of experience shows that it is not found in all the phases of the conscious life, and that when present it is not in the true sense self-knowledge or self-consciousness.

3. It is not found in the beginning of conscious experience. When the world of the child first emerges into being, it consists of sensation or feeling, with little or no differentiation in it. It is difficult to realize the infant's experience; yet it is safe to assert that the infant does not characterize its sensations as objects, and does not distinguish itself as subject from a world of objects.

> "The baby new to earth and sky . . . .
> Has never thought that 'this is I.'"

There is, therefore, one stage in the conscious experience of human beings at which the distinction of the self from other things, and the awareness of it as such, do not present themselves.

4. Another stage in mental development is reached when the child knows itself as distinct from other things. The ground of this distinction, as we saw when the genesis of the category of substance was under consideration, is the recognition by the individual of the spatial distinctness of his body. With this spatial

width are associated the feelings which are designated the "somatic consciousness." We thus get the core of the idea of the self, alike in the mind of the child and in the mind of the more mature.

Round this central idea are associated those which pertain to the individual's activities. These do not all, indeed, have reference, in the individual's consciousness, to the idea of the self, but very many of them have. They are thought of as emanating from the actor, and gaining results for him. The self thus becomes the centre of activities. The idea of the self is therefore present when activity refers to personal well-being; it is peculiarly a feature of the life of utility. When it is considered how large a place the utilities have in conscious experience, it can be seen with what constancy the idea of the self must appear.

5. When, on the other hand, the intellectual life is considered, it is found that the feeling or idea of the self is not a necessary part of consciousness. The intellect may, of course, be directed to subjects with which this idea is naturally associated. But there are many things which have no such association, and in proportion as attention is concentrated on them, the idea of the self tends to disappear. Illustrations of this tendency can be found in sensorial activity. When

the vision is absorbed in the colours of a beautiful sunset, there may not be any distinct thought of the self, or any contrast of the self with a not-self. The lover of music finds his existence, when he is listening to the orchestra, to consist in sounds. Likewise, in the operations of the abstract intellect there is the same abandonment of the self feeling: when the mathematician, for instance, is occupied with his problem, there may be no thought of the self present to his mind.

In view of all these facts it can be seen that there is no warrant for the supposition that there is an awareness of the self as separate subject in all the conscious activities of the mind.[1]

6. For the analysis of the idea of the self shows us that it is a particular idea among other particular ideas. Even when the original body-consciousness has been enriched by the addition of other ideas pertaining to the intellectual or moral or religious life, the idea of the self thus gained still remains a particular idea. And since the number of ideas to which attention can be given is limited, the entrance of one often means

[1] It may be here remarked that illusions as to personal identity do not arise from intellectual or sympathetic absorption as such; they appear when the self-idea is present and is associated with experiences that do not relate to it.

the driving out of another, and hence the idea of the self may in its turn suffer exclusion. It is true, there are some ideas which are very persistent, and from the nature of the idea of the self we may expect it to show this persistency. And there is a sense in which it is, save in the extreme cases of rapt attention, seldom entirely absent from consciousness. Often, however, it is not so much the idea of the self that is present as that body-consciousness of which the self-idea is the resultant. The body-consciousness, since the body is always with us, is not readily eclipsed. And as these body-feelings are so intimately connected with the self-idea, there is a sense in which the idea may be said to have great persistency, even when in its rounded, determinate form it is not present.

7. But it may be contended that the idea of the self must be present, since to it all experiences are referred, and since, moreover, it is only through this reference that the conscious life has its unity and sense of identity. This reference of conscious experiences to the self must be admitted to take place very frequently, in a more or less direct way. The idea of the self is the centre of the conscious life, and it is by the association of the various experiences with this constant quantity that the continuity of the

soul's life is attained; for, being a part of the memory of the past, and also a part of the present experience, it is the bond which unifies past and present. Yet while all this is to be recognized, it is to be noticed that the association may be remote and indirect; and also that, when present, the self-idea may not have its complete and developed form: the association may be with a fragment of the idea, or with something that serves for the time as a sign of the idea. It is only in this qualified sense that the self-idea is to be taken as the centre of reference for our experiences.

8. We come now to the question, whether a knowledge of the self is yielded by the self-idea. Such knowledge cannot be given by the idea when it is absent. Nor is this knowledge given by it when it is present. It presents itself as one idea among other ideas, and knowledge of it is not knowledge of them any more than knowledge of the pen which I now see is knowledge of the paper which I also see. The idea is usually the product of a fraction of experience. And should it not merely represent the body-consciousness, but be made to include elements of a different character, it still has the limitations of the general concept, and fails to mirror the soul's life. We cannot by it gain knowledge of the self, when by the self is meant the actual experiences of

consciousness. If the self has a knowledge of itself in every conscious state, it is not by this idea that such knowledge is to be attained.

9. It is scarcely necessary to do more than refer here to the transcendentalist's view that the self is not to be regarded as something apart from the soul's experiences, but as given *in* these experiences, being the one in the many. The doctrine is of value in so far as it calls attention to the concrete, whether we call it "many" or not. Its weakness is in its doctrine of the one. The one is a category, determined to be, say, reason; it is then regarded as realized in the manifold actual experiences. The illusion of the one in the many need not be again exposed; nor need it be again demonstrated that it is not by the employment of such categories that knowledge of the self is to be attained.

10. Yet it may seem that in knowledge there must be the antithesis of object and subject, and that, therefore, if the self is the concrete manifold of experience, it must be copied, if not by a general concept, by a cognition which has the manifold for its content. Let it be observed, however, that there is not in the self-cognition now being considered any consciousness of such an antithesis. We do not set ourselves over against ourselves in the ordinary course of experience. We may observe ourselves

when certain feelings are active in our minds; but such observation is usually little entitled to the name knowledge; besides, even it is exceptional. It is not in these rare glimpses that the continuous knowledge of the self is to be found.

There is a further difficulty in the way of such knowledge. If the objective experience is to be copied, it must be copied by a similar experience. But this means that the same faculties are exercised in precisely the same way, both in the original experience and in its copy: that is, the two collapse into one, and the antithesis is rendered impossible.

Even were this difficulty not insuperable, there is another to be encountered. If there is to be a knowledge of each conscious state as it is experienced, this knowledge must be known by a new conscious state, and the new state must be known by yet another, and so *ad infinitum*. It need not be shown that the method which involves this infinite progression is not the method of the self-knowledge which we are seeking to explain.

11. Is it then an unwarrantable assumption to say, that the self knows itself in each conscious state? The nature of this self-knowledge and its possibility are understood, if we consider the nature of any fact of conscious experience. *A conscious state is essentially knowledge of itself. Its reality is*

constituted by consciousness, and being a fact of consciousness, it is felt or known. A sensation is in itself an absolute fact, and, being a conscious experience, it is in the experience of it known as it is; thus it is self-knowledge. Our feelings exist only as feelings; and as the feelings are, so are they felt; and as they are felt, so they are. *All the conscious states which constitute the self are known in their reality in and through the experience of them.* Their *esse* is at once *percipere* and *percipi.* In them "knowing and being" are identical. Consciousness is self-consciousness.

12. The doctrine of sympathetic imitation lends confirmation to this view of self-knowledge. For knowledge has shown itself to be a function of every conscious state. Each element of the mind is cognitive in respect to the experience of other individuals: it is through its sensations, emotions, volitions, that the mind knows the corresponding elements in the experience of another. Each one of these elements can fulfil this cognitive function because it is by its very nature cognitive. If through it we can know other things, it is because, first, its being is knowing.

13. It is, therefore, not alone in concepts of the self that knowledge of it consists. These have their value: the science of psychology has its value and

utility. But, apart from the service they render as symbols of the connections obtaining among psychic facts, they offer no special cognition of the self. They also are conscious facts, and therefore the self is known in them; but they are only a few among many such facts. Any sensation, any fancy of the imagination, is, as truly as any category or law of psychology, a knowledge of the self; nay, the sensation of the amœba is as truly self-knowledge as the category of the philosopher.

Kant believed that knowledge of things in themselves was possible, not for an understanding that used concepts, but for an "intuitive understanding." Kant, in claiming for this understanding knowledge of things in themselves, failed to see that every conscious experience is a thing in itself. It cannot be disposed of as a mere appearance, for an appearance cannot be only an appearance; if it is an appearance, it is thereby a fact in itself. This series of facts of consciousness is known in the conscious experience of them. That intuition by which "the existence of its object is given" is thus offered in every conscious state. We found[1] that an approximation to this intuition is made in sympathetic imitation; yet we also found that sympathy does not constitute, but only copies, the object. We

[1] Chapter X, § 18.

can now see that the intuition which at once constitutes the object and knows it is given in every state of consciousness as such.

14. It is in this self-knowledge, in which being and knowing are one, that there is to be found such justification as can be furnished of that idealism which makes the universe consist simply in the states or forms of the ego. They are not objects to the ego; they are not more its knowledge than its life. It is this self-knowledge which constitutes, we may suppose, the knowledge of the absolute being, for which there can be no separation of subject from object. Nevertheless, it need scarcely be recalled, this theory of knowledge breaks down when the knowledge of one individual by another is to be explained.

15. It need not be pointed out how absolute is this self-knowledge. No agnostic objection, that we know only phenomena, avails here. The conscious state is a fact, and it is known or felt absolutely as it is. It has no being except as it is felt. It may seem different when it is examined more closely, but that is because it has itself changed in the process of analysis. It was felt absolutely as it was in the original experience: and the new experience is absolutely as it is felt.

16. It was seen earlier that there is a sense in

which all experience is a knowledge of the self, for it all consists of the knower's conscious states. Earth and sky and all they contain — these are for the knower, in the first instance, his ideas, and thus bits of himself. Even his most sympathetic feelings are yet his own feelings.

At the same time we have contemplated the great efforts made by the mind to transcend this subjectivity and reach the world of other things. And we are now in a position to see the relation of this self-knowledge to that other knowledge.

That the mental states of the knower are a copy of the states of the object, is the conclusion as to knowledge which we reached. It will be observed, however, that the duality of subject and object is still to be recognized. Efforts have been made to annul the distinction between them, and declare their identity to be a fact, or regard it as an ideal. The idealistic doctrine which reaches their identity by denying the independent existence of external objects is familiar. On the other hand, the mystics, separating God from the world, and regarding it as their ideal to reach absolute unity with Him, deny, in substance at least, the absolute reality of things. But neither the idealistic nor the mystic denial of the reality of individual things or persons must be all the fact that

the universals for which individuals are sacrificed are concepts or abstractions derived empirically from observation of these very individuals. It is the individual that is real. Knowledge is knowledge by individuals; the problem of knowledge, as we saw at the outset, concerns itself first with the knowledge of individual human beings by other human beings. And when the problem is thus presented we can see that one individual is not merged in another. If we regard the brain as the manifestation or sign of consciousness, we can see that the brain of the knower cannot take the place of the brain of the person known. Even so, the consciousness of the one cannot be lost in the consciousness of the other. The individual distinctness is preserved. Knowledge of the experiences of another is a *copy* of them.

Not that there is here being asserted any hard metaphysical dogma of the unity and continuity of the soul's life. We know too little whence our experience cometh, and whither it goeth, to assert such principles even in a symbolic signification. It is simply to be noted that certain phenomena are distinct, and remain distinct, notwithstanding their parallelism.

Yet, at the same time, this distinctness is not to be characterized as isolation. The isolation is tran-

scended in sympathy. The two souls (to continue the use of the symbolic language of number) may remain two, yet are they possessed of like thoughts and feelings. The one who shows sympathy remains himself, but his self is now a reproduction of the life of another. May it not be said that this is the closest unity which we can conceive as existing between spirits? It is not, indeed, annihilation of the self; but such annihilation would be the negation of this unity. In sympathy the soul is not lost, or annihilated, yet is it at one with the object.

The soul, therefore, cannot lose its finitude or individuality. Yet it transcends this individuality by sympathy; for while retaining the limits of individuality it yet mirrors the world of other individuals.

It may be appropriate at this point to refer to certain statements made by Lotze[1] regarding the relation of knowledge to the object. He declares that a thing can never be known as it is, but only as it appears to the knower. Knowledge is never the thing itself, but always consists of ideas about the thing. And even, Lotze adds, if one should become the object, one would not know the object: to become metal would not be to know metal. We can

[1] *Logik*, § 308.

now see how such statements are to be corrected. The knowledge of the self does not consist of ideas about the self; every state of consciousness is known absolutely in itself. And by imitation we gain a knowledge of other things, not as they appear to us, but as they are. We do not, indeed, become things, but we copy them in their objective constitution. It may be added that Lotze's reference to metal is fitted to be misleading. It is not too much to say that we are absolutely ignorant of the inner being of metal. If we say that metal is non-sentient, it has no meaning to talk of a man's changing into it. If metal is sentient, he who becomes metal knows himself absolutely even in this metamorphosed state.

17. It may be pointed out that there are two tendencies in the development of the self. The one is toward individuality. New sensations, new emotions, new ideas of all kinds, are welcomed. All that lies in the potency of the soul to think and feel is to be realized. On the other hand, there is the tendency to sympathy, to the assertion of kinship with men and things, to the knitting of the world in the bonds of unity. It might not inappropriately be said that there is in the self the centrifugal and the centripetal tendency. Each of these tendencies or functions must have scope for itself. It is as they are both realized that the fulness of knowledge is

reached. The life of the self as it is lived for itself may be called the lyric of the soul. The perception which it has of the life of others is its epic or drama. It is in the combination or alternation of these that the true music of the soul is uttered.

18. The complete definition of knowledge with which we started may now be recalled. Knowledge was said to be the presence in the mind immediately, or in copy, of that which constitutes objects. In self-knowledge the object is immediately present in the mind; for, in the experiences of the self, knowing and being are one. In the knowledge of other persons and things the object is present in copy; for the individuality of the knower is not lost in the individuality of the object, even as the brain of the man knowing remains distinct from that of the man who is the object of observation.

CHAPTER XIII

THE PHILOSOPHICAL PROBLEM

1. What is the bearing of the theory of knowledge which has been propounded upon the problem of philosophy? It is to be remembered, first of all, that epistemology or the science of knowledge is a part of philosophy. It does, indeed, cover the ground of psychology, in so far as it considers the origin and content of the various cognitive factors; but probably all would agree that it is a peculiarly philosophical problem to determine how the cognitive state must be constituted, in order that it may represent its object. We have, therefore, been dealing directly with one of the problems of philosophy.

2. Further, epistemology is to be regarded as the first part or foundation of philosophy. If we wish to know the being of things, it is essential that our first endeavour should be to decide the question, what mental elements are to enter into the cognition, and what the method of their employment is to be. This may seem like a demand that we should know before we know; or, in Hegel's language, when he censures Kant for requiring a

preliminary criticism of knowledge, it is like the requirement that we should learn to swim before entering the water. But it can be readily seen that in systems of knowledge there is presupposed a certain view as to the nature of knowledge. There are, for instance, certain assumptions peculiar to the unreflecting period of the mind's development; it is then generally assumed that sensations, such as those of colour and sound, are the truth of objects. On the other hand, in the period of reflection, there has been, as we have seen, an almost universal assumption that the method of concepts is the true method of knowledge; this was the fatal assumption of Hegel. It is true that a correct theory of knowledge is likely to be reached only after many attempts have been made; and in this sense it is true that we must proceed with the work of knowledge, in order that experience may eventually disclose to us the true content and the true method of knowledge. But it must, nevertheless, be maintained that the true system of knowledge presupposes the conscious, or unconscious, use of the right method; and it is surely possible to hasten that consummation by detecting the faults of the methods that have been employed, and by showing some of the new instrument needed that the desired r

The dependence of philosophy upon epistemology is likewise made evident by a survey of the history of philosophy, from which it is seen how the great epochs in philosophy have been associated with activity in the study of epistemological questions. The belief of Socrates, that knowledge consisted in clearly defined concepts, bore fruit in the idealistic philosophies of Plato and Aristotle; Locke's theory of knowledge was followed by the metaphysical theory of Berkeley; Kant's reassertion of the value of categories was the natural preparation for the great German idealistic systems. When it is determined what the elements are in which knowledge consists, it is natural to construct a system of the things which such knowledge can represent. The conclusions embodied in such theories may not be satisfactory. But the theories bear testimony to the influence which a study of the cognitive instrument exercises upon philosophy. It is, therefore, proper to inquire whether the doctrine of knowledge which has been expounded helps in the effort to state and solve the philosophical problem.

3. It is the first object of this inquiry to gain as clear a view as possible of the function which in the course of history has been assigned to philosophy. The view adopted as to this function will be illustrated by reference to the chief forms of philo-

sophical doctrine; and these forms of philosophy will be criticised from the standpoint of the theory of knowledge.

4. Philosophy is, literally, love of wisdom. The wise man is he who can understand his affairs so correctly that he can control them to satisfactory issues. It was probably this practical knowledge which was loved at first by the Greeks, as by the Jews. But wisdom came to take a wider range than the practical. When men began to meditate upon the world, they found delight in contemplation for its own sake, and the name "wise man" was given to others besides those who were distinctively moralists.

Philosophy or the love of wisdom thus became transformed into the love of knowledge. Knowledge was sought wherever it could be found. The physical world was studied as well as the mental. The early systems of philosophy were to a large extent theories about material things: the stars, for instance, were a perpetual source of wonder, and one thinker after another gave his pathetic guess as to their nature.

5. As knowledge increased, the work of knowing the world became too great for one individual. Division of the labour was necessary; and the special sci[illegible]o have separate territories.

They seem now to be independent of philosophy, or even hostile to her. Yet she has not ceased to claim their allegiance as their ancient mother and queen. While each science has its allotted sphere, and brings into order the facts in that sphere, philosophy claims that such a science by itself is partial and incomplete, and that the works of the sciences must be made part of her larger work. This claim on the part of philosophy to include science finds recognition in the uses to which the name philosophy is put. In the expressions, "Philosophical Faculty," and "Doctor of Philosophy," the term "philosophy" refers to the whole circle of the sciences. "Natural philosophy" is still used to denote physical science.

In view of the claims which philosophy has made, and the work which it has attempted to do, that definition of it expresses most clearly the function which it has assumed, which represents it as the science of the sciences. Science is philosophy applied to a particular problem; philosophy is science made universal and complete. If science seeks the unity of law in a particular sphere, philosophy seeks the law of laws. It may not be apparent how this definition of philosophy covers the investigation of such subjects as the existence of matter. But it must be remembered that t

nification of science has not always been the same. Science means at present chiefly an inquiry into laws, but it was wont to mean an inquiry into the nature of things or substances. When this latter point of view is adopted, it is natural to inquire what the substance is, and even whether it exists at all. The problems of philosophy change as the categories which it uses change. Science is affected by this change equally with philosophy. At all stages at which the sciences are differentiated from philosophy, it can be seen that philosophy claims to be the science of the sciences.

That this is the true interpretation of philosophical claims and methods will be still more clear when we consider the chief forms which philosophical doctrine has assumed in modern times.

6. One of the great types of modern philosophy is presented in materialism. This system of thought is not, indeed, peculiarly modern: in one form or another it is as old as philosophy. It is, however, in modern times that materialism has gained its great triumphs. It has had the advocacy of such philosophers as Hobbes. It is the creed of many scientific men; and it is probably correct to say that it is the creed of many more, so far as their views of the universe have been systematized, same time, they have admitted into

their minds fragments of belief little consistent with their scientific doctrines.

7. This reign of materialism in modern times seems to be due to the extension of physical science. One of the most striking phenomena in the modern intellectual world is this extension of science. While metaphysicians may seem open to the charge that they are floundering as they have done for two thousand years, the labourers in physical science have been making sure and steady progress. They have pushed farther and farther into chaos, and have seldom been obliged to retrace their steps. The soil they reclaim is thenceforth fruitful and habitable. And not only have they accomplished much; they have a wonderfully clear conception of the general character of the work that remains to be done. They have come to think of the world as made up of atoms and energy, or as ultimately analyzable, it may prove, into mere forms of energy; and, as the great fundamental doctrines of science are the principles of the conservation and transformation of energy, the task of the sciences is prescribed to them. It is to trace the forms of this energy and its transformations. The history of the physical world is the history of these transformations; and it is believed that, should new phenomena disclose themselves, they will prove to

be forms of energy correlated with, or convertible into, the forms now familiar.

8. It is not necessary to illustrate at great length the meaning of this doctrine as it applies to the inorganic world. It is scarcely too much to say that the tendency of science is to reduce all forms of energy to mechanical energy. The attempt has been made to divest gravitation of the mystery which envelops it, by showing, not merely that it is convertible into other forces, but that in itself it is explained by the impact of particles. The distinction between mechanical and chemical forces is considered to be a vanishing one. Thus a remarkable simplification of the physical universe is being reached.

9. It may seem that this account of the universe finds the limits of its applicability when the phenomena of life present themselves. Yet the progress of research has gone to show the continuity of such phenomena with those of the inorganic world. The beginning of life may be in many senses a mystery; that is, the historical conditions in which life first arose have vanished without leaving any record. But of life, as it is known to us now, a complete account can be given on chemical and mechanical principles: there is no process in the body of any plant or

animal which cannot be so explained. Life is not, on this view, to be regarded as something separate from the material elements, using and controlling them: it is only a name to indicate the peculiarities of this special set of physical phenomena. The evolution theory is a purely mechanical theory; the struggle for existence and survival of the fittest mean that the machine which fits its environment best, and responds best to stimuli, is the one that lasts. It is therefore urged that nothing in organized bodies can be pointed to which contradicts this materialistic theory of the universe.

10. In the case of human consciousness, materialism still follows its own mode of explanation. The physiological theory of the mind has many facts to support it. The conscious life is found to be dependent on the brain. The kind of consciousness depends on the portion of the brain called into exercise. When the activity of the brain is suspended, consciousness ceases. Likewise, the retention of experiences in the memory is a physiological process; the retention of impressions made on the brain-cells is memory; the particular memory-function known as recall means the renewal of the activity of the cell which was modified by the original impression. From all

this it seems natural to infer that thought is an effect of which the brain is the cause. It may therefore be said that the brain secretes thought as the liver secretes bile; or the more careful expressions of Büchner may be preferred, when he teaches that thinking is a mode of motion characteristic of the substance of the central nervous elements, as the motion of light is of the universal ether.

When this conception is gained, the appeal to man's freedom and sense of responsibility has little weight. The proofs that all human actions are subject to law are many and strong. The materialist can, in regard to this subject, claim the support of very many who differ from him in other articles of their creed.

11. Materialism thus can be seen to make the attempt to offer a science of the sciences. It introduces into all the spheres of existence the unity of mechanical conceptions.

12. Many criticisms suggest themselves, but attention may be restricted to those which arise from the special theory of knowledge that is now before us. In the first place, this philosophy is made up of general concepts. But we have seen that knowledge, to be true, must be of the concrete. This philosophy, therefore, [illegible] e truth. Let any one compare its [illegible] xperiences,

and he will see how little it is fitted to give an adequate copy of the reality. Again, if knowledge is gained by sympathetic imitation, we cannot know matter at all, except as it is given in thought. Ideas, as Berkeley said, can only be like ideas. But, according to the materialist, thought is a mode of motion peculiar to the special combination of elements found in the brain. The other modes of motion and forms of matter cannot be known by this. If they can be known, it must be because they resemble thought. But if we adopt this point of view, we no longer regard matter as a substance, independent of thought, which has thought for one of its "accidents"; we are forsaking the position of the materialist, and are becoming idealists. Materialism thus suffers from a fatal contradiction; if it postulates a matter which is unlike thought, it is postulating something which, from the conditions of knowledge, is absolutely unknowable, and about which, therefore, it is impossible to make any statements whatever.

13. Dualism is another form of philosophical doctrine. It was the doctrine of Descartes and Reid; in a more or less vague form it is a very widespread belief. According to it, there are two substances, or forms of being. Matter and mind both exist. Science thus has two spheres: the

science of the sciences does not reach absolute unity. It is not necessary to offer a lengthened criticism of dualism. In so far as it maintains the existence of material substances, it is asserting the existence of something intrinsically different from mind, which yet, in being known by mind, is found to be like mind; it thus contains a contradiction similar to that which we found in materialism. On the other hand, in so far as it deals with the facts of the spirit, it is akin to idealism, and may be treated under that head. It may be added that, while a thorough-going dualism is a possible doctrine, dualism is generally not thorough-going. Generally matter is referred for its origin to a supreme being that has the properties of spirit. Thus, dualism is usually an implicit idealism.

14. Idealism is the fruit of reflection upon our ideas. It examines the conception of matter, and finds that it is due to the feelings of different senses, which have been elaborated and compounded, and also in part, it may be thought, to conceptions born within the mind. Material substance is thus, in the first instance, a cluster of mental states. The atom, of which the materialist makes so much, is a nest of conscious feelings that have been ejected into space. Likewise, the other categor[illegible]rialism, space, time, energy, are, in [illegible], mental

facts. The idealist does not deny or ignore any fact to which science can point; but he yet finds that in knowledge the knower does not escape from the circle of his ideas. If he comes to recognize an objective system independent of his experience, he yet holds that that system is constituted by ideas like his own.

15. Idealism as a science may take more or less developed forms. Its attempt to state the ultimate law obtaining in the multiplicity of mental facts may consist merely in the assertion of their common character as ideal. The groupings of phenomena which the sciences have effected may be accepted, but no further connection may be seen between these groups than the possession of this common quality. Berkeley and some empiricists present an idealism of this undeveloped kind.

16. Idealism may, however, advance to a system in which the relation of the various thoughts or ideas is presented. The philosophy of Hegel offers the completest form of this more elaborate idealism, and may be considered in illustration of it. Hegel regards the doctrine that the world exists for, and in, thought, as only the beginning of philosophy; the law of thought must be found, and the motions of thought must be traced. Thought is essentially knowledge, and the object of this knowledge is

thought itself. The Absolute is subject; it is a subject which has itself for its object, the object being given in the thought of the subject; in other words, the absolute is self-consciousness. But the absolute does not know itself immediately; this knowledge must be mediated, or given through a process. The significance of the process is that it is constituted by a series of attempts on the part of the absolute to think or know or define itself. Each definition is tried, and, as it is found wanting, a truer definition takes its place. These definitions do not come at haphazard; the process of thought has a beginning, and it has a climax. The first definition is being; in knowing itself the absolute first thinks this of itself. This thought is the first, because it is the barest and emptiest; it is "immediate"; or, it is not due to any preceding activity on the part of thought. But this thought is not an adequate representation of the absolute. Being is too poor a category to apply to God. Whatever truth there is in it will be found preserved in higher categories; it, in its first crude form, is discarded, or is retained only as the mediator of something better. Other categories appear to take its place. The absolute thinks itself as a world of determinate qualities, such as colours and sounds; again, it thinks itself as substance; again, as a causal system; true, ade-

quate idea of itself when it knows itself as the subject that in its object meets only with itself.

Further, this process from one category to another is logically necessary. Each imperfect definition contains in it a contradiction; we must think with it something that negates it. Thus, to think being is also to think nothing. To think determinate being is to think other determinate beings which limit or negate it. In the highest category, that of spirit, the contradiction is harmonized, for in self-consciousness the self and its other, or subject and object, are identical. It is thus that spirit proves itself the necessary climax of this logical evolution.

It is not to be forgotten, if we would do full justice to Hegel, that this system of categories is actual only in concrete human experience. Our experience is the thought of the absolute. Our observation of the world is not that of spectators of the absolute; it is the self-cognition of the absolute. When we think of the world as full of sights and sounds, and pleasures and pains, it is the absolute that is thinking so of itself. When we think of the world as a causal series, the absolute is defining itself in our category. When we reach the definition of the absolute in a true philosophy, the absolute has become self-conscious.

It can be seen that this system allows the amplest room for the particular sciences. The sciences are the developments of the lower categories. If we try, for instance, to know the absolute through the category of causality, we may follow out the conception in an indefinitely prolonged series. The conception is a distorted medium through which to look upon the absolute, but if we wish to remain constant to this category, it is in one sense possible for us to adhere to it. At the same time, there is no final logical rest in this category.

Thus, this system of idealism takes all our ideas, those that are unreflecting, and those that are of a scientific or philosophic character, and strives to reduce them to unity of principle. Regarding spirit as the highest conception, and joining with it the conception of evolution, it finds spirit embodied in each stage of the logical development. In this concept of concepts it reaches the absolute unity.

It can be seen with what propriety such a philosophy may be designated the science of the sciences. For Hegel, indeed, science is not restricted, as it is for the positivist, to relations of coexistence and succession. He recognizes many universals, and tries to find the synthesis of them all. He believes that he offers the absolute science.

17. **When we** value of idealism

is, when tried by the theory of knowledge, we find that its principles are in part justified. If knowledge of things consists in sympathetic imitation of them, they, to be knowable, must be of the nature of thought. It may be presumptuous to say, with the idealist, that there are no realities inaccessible to thought; but it must, at least, be said that by ideas nothing but ideas can be known. Idealism does not, indeed, always allow that there are objects independent of the knowing subject, but, in so far as it does, it is faithful to the epistemological principle in proclaiming their idealistic character.

18. But, on the other hand, idealism has sought the constituents of knowledge in categories. This is no necessary result of idealism, but it is the result which history has brought forth. The inadequacy of this account of knowledge need not again be set forth.

19. It may seem that the system of Hegel is not exposed to such censures. For Hegel has condemned abstractions, and has declared that the reality is concrete. His universal is not abstracted from other ideas, in comparison with which it is bare and poor: it is not being, but spirit.

The value of this doctrine, in its recognition of the fact of self-conciousness, should be recognized, but it should not be forgotten that for Hegel the

instrument of cognition and the object to be known are at once the category or concept. His logic is an account of categories: they constitute the essence of God. Nor in the realms of nature and spirit have we escaped from categories. In nature the idea has passed into its "other"; the categories of the logic are thought as other, or viewed in another aspect, and, consequently, have a movement as if they were liberated and independent beings, and not, as in the logic, mere moments in the evolution of the idea. Nevertheless, they are still categories. Likewise, the spirit has its being in categories; its ideal is reached in the categories of an absolute philosophy. Yet the highest category is not raised above the limitations of the lower. The idea of spirit or reason is, as we have already found, a general concept, and is, by its generality, untrue to the concrete cases of intellectual experience. It is, also, as associated with that particular form of experience, the more unfit to be regarded as the truth of all the facts of the universe.

20. Again, it is necessary, in presence of Hegel's idealism, to recall the empirical origin of the categories. Hegel speaks of them as a pantheon of [illegible]; necessary to attempt [illegible] dig-

nity accorded to them; yet it is found that their origin and function are not those which Hegel assigned to them. It follows, moreover, from the fact of their empirical origin, that there is no such connection among the categories as that in which Hegel believes when he says that each category gives rise to another by an absolute logical necessity. There is this appearance of necessity only when the new category forms part of the one that is thought to precede it. Some determinate being gives the thought of other being, because to think the limit of the one is to think what is beyond the limit. On the other hand, substance does not give rise to causality, unless the substance is already thought of as having efficient agency. There is no reason why mechanism should give rise to chemism, or chemism to teleology. The transition from one to the other is determined by the contingencies of human experience.

21. The Hegelian system may be taken to present, as no other system does, the ideal which philosophy has been striving to reach. Philosophy has always been construed as the science of the sciences, but sometimes there has been only a vague apprehension of this signific
By Hegel, as by no other, the requiremen

science of the sciences has been understood in all its comprehensiveness. All the more does he afford the most striking evidence that philosophy has been moving in the wrong direction. It has become divorced from truth, for it has forsaken the concrete things in which reality consists.

22. The results of this criticism and the true function of philosophy may now be briefly indicated. First, philosophy is not a system of the universe. The demand for a system is born of the belief that abstract principles or general laws contain the truth. If the facts of the universe can be resolved into a definite number of general laws, absolute knowledge of the universe is possible, and the search for the system of such laws, and for the ultimate law of laws, is justified. But inasmuch as this system of laws is not adequate to the revelation of the reality, it cannot satisfy the demands of philosophy. Because it seeks truth, philosophy must renounce its satisfaction with systems of the universe.

23. Again, if philosophy is not a system of the universe, it is still less to be regarded as giving an explanation of things. The explanation of a thing is its sufficient reason. It may refer to the subjective necessities of the mind, as when a geo- [illegible] the ground or reason of

certain deductions from it. Or it may refer to what is objective, and then to give an explanation is to tell the causal agency. It has been already shown[1] that, both in deduction and in empirically discovered relations, the idea of necessity is a form of the causal feeling: our association of production with the idea of effort is so persistent that even in the conception of logical necessity we are confronted with a form of causality. But philosophy cannot allow itself to be mocked by the illusions and spurious pretensions of this category. Nor may it be said that causality is a bond which unites one concrete fact to another concrete fact, for thus there is involved the fallacy of explaining one thing by another thing. It is the thing in itself that we should know. The reference from one thing to another is necessary in so far as association is necessary to truth-finding; but, except as the minister of sympathy, it leads away from truth.

In short, if science is the statement of general relations, philosophy must not be called the science of the sciences.

24. But it must always remain the function of philosophy to present the ideal of thought. Logic also fulfils this function, but it fulfils it because it has first learned of philosophy. If knowledge con-

[1] Chap. V, § 26.

sists in sympathetic imitation, philosophy must present the ideal of such imitation in respect of the intensity and completeness which it exhibits, and, also, its ideal in respect of the range of objects to which it is applied. It shows how a perfect knowledge of the individual is to be coveted, and it seeks an extension of that knowledge to the whole universe. If the truth is with God only, philosophy yet has for its ideal to know the truth as it is known to the absolute being whose life it is. And if this knowledge comes to man part by part, it is the philosopher's ideal that each part shall be cleansed of the alloy of falsehood.

25. It is implied in this, that philosophy must give a doctrine of method. It must show how the knowledge which is desired is to be attained. We are thus brought back to the principle laid down at the beginning of the chapter: the basis of philosophy is epistemology. Yet, at the same time, epistemology is only the propædeutic to philosophy.

Further, philosophy must use the results of science in the doing of its peculiar work. It is unnecessary to show again how valuable, in the work of knowing, the methods and attainments of science must be accounted. For economy in the work of the intellect, we cannot afford to dispense

with science. In epistemology and kindred studies, in attempts to define philosophy, we relapse of necessity into the categories of science. But philosophy cannot accept such categories as other than symbols, and, while it may look with more or less satisfaction on scientific systems of the universe, it believes that these are not the truth, but are, at most, only a means to truth. *Philosophy attains its end, not in the formulation of general conceptions, but in the realization of the concrete life of the world.*

It follows that philosophy must keep itself free from the prejudice that cognition is constituted by only one set of mental factors. Philosophy must use all the resources of the mind that it may find that wherewith to copy the objects contained in the world.

26. When philosophy has this view of truth, we can see how idle are the fears that truth may be exhausted. Such fears are justified only if the truth consists in a system of laws. The well-known paradox of Lessing, who said that, had he to choose between truth and the search for truth, he would unhesitatingly choose the latter, becomes an unmeaning statement when the right conception of truth is attained. If truth is knowledge of the concrete facts of the world, the declaration of any one that he would not accept truth were it offered him

in view of the world's vastness, like a declaration that one would decline to be God. We may not fear an end to knowledge; we may rather fear that, beyond our subjective experiences, we shall fail to make a beginning.

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CHAPTER XIV

PRACTICAL APPLICATIONS

1. There are certain practical questions which arise in connection with the account of knowledge which has been offered. What is the effect of this view of knowledge on scientific work? How does it help to determine the function of art? What course should be given to education in that which pertains to the intellect, and, also, in that which pertains to the moral nature?

2. The first question has been answered by the discussion of the nature of knowledge, and need not be asked here, save that the answer brings the practical conclusions of the doctrine to a focus; and, also, recalls what must be borne in mind in the study of the other practical problems. It is, first of all, to be remembered that science has other functions besides that of truth-seeking. It subserves the great utilitarian interests of life, and these can be secured equally well, or much more expeditiously, if there is offered only a symbolic statement of the facts. When the sailor wishes to guide his ship

aright, he studies the stars and ocean currents. He does not care for a knowledge of them beyond what is necessary to determine his course, and for this purpose it may be sufficient to have a purely algebraic representation of the facts. Thus, science has a large work for the doing of which the subject of sympathetic imitation need not be considered.

3. But science must proceed otherwise in so far as it lays claim to the high function of truth-seeking. In all the sciences, save some forms of psychology, phenomena, and not things in themselves, are considered; and in all the sciences, including psychology, the search is for laws. Now, for knowledge it is important to study the relations of coexistence and succession which obtain among facts. But in order to possess truth it is necessary to combine with the method of science that of art; and as the art which penetrates most directly into the inner life of things is poetry, it may be said that *there is needed for truth a poetical science, or a scientific poetry.* One of the great intellectual wants of the world is a poetry that is not a mere opposition to science, but that follows the work of science, and supplements it with the results which its own peculiar method yields. Such a poetry must keep to facts even as science does. [illegible] them with the same scrupul[illegible]

expedite its interpretations, find their relations even as science does; over the schools of such poets should be inscribed the words, like those which formed the legend on the portals of Plato's academy, Let no one enter who is ignorant of mathematics. At the same time, it must keep to the concrete, reproducing it as it actually is, and thus giving that imitation of the reality which alone is knowledge.

The lesson for science, therefore, is that it must not isolate itself or think itself sufficient by itself. The abstract intellect is imperfect, being alone; it needs the coöperation of the other faculties.

4. On the other hand, there is a lesson to be learned by art. It is necessary that poetry, to speak at present more especially of it and of the prose epic or novel, should understand its sympathetic function. It should not become philosophic or scientific, in the usual sense of these terms. We may need a poetical science and philosophy, but we do not need an abstract philosophy in rhyme. Not that poetry is to limit itself to the so-called emotional part of our nature, — it must mirror the other processes of the mind; and, accordingly, there are poems and novels which reflect the problems and the reasonings which have occupied consciousness. If the hero represented has been occupied with theories and arguments, it is legitimate to reproduce in the

poem that current of opinions and arguments. It may well be as worthy a theme as the passions of the knight engaged in the tournament. A poem or a novel that is philosophical in this sense is to be commended for its realism. Let it be observed, however, that such a work of art does not offer abstract formulæ as if they represented reality. The truth that is given is in the presentation of the life of the thinker; not in any solution of abstract scientific or philosophic problems. The picture is meant to be true to the thinker, and not to the objects about which he is thinking.

5. A question presents itself here which it may be well to consider. If scientific reflections can thus be reproduced in poetry, is not the scientific treatise, the manual of mathematics or logic, a poem, inasmuch as it reflects the ideas of the author? Must it not, on the above supposition, be regarded as either an epic or a lyric? It is to be answered, that such a treatise does not disclose the author's mind as the poet would disclose it. The treatise is meant to disclose a set of objective facts or relations; and the reader has his attention directed, not to the writer's mind, but to this objective system. Moreover, the statements in the treatise are excerpts from the writer's experience, a pages

do not, save to this limited extent, reflect his experience. The fancies that came and went, the hopes and doubts of life that hung like clouds of light and darkness about the horizon of consciousness — none of these are reproduced; and, since he felt their influence in all his thinking, his reader may not be in a position to copy his thought. But suppose the treatise could be taken for a true picture of his thoughts, and suppose the reader should follow the train of thought, — then for such a reader, so taking it, the book is poetry. And probably it is only to the mind to which thoughts of a treatise in logic or mathematics are repellent that such a statement seems strange. To the mathematican, the mathematical process is beautiful and fascinating. Apart from common prejudices, it is only a mind alienated from the mathematical mode of thinking that would deny that a series of mental events such as this might rightly be presented in the epical or lyrical fashion. Even if the sensuous form of rhyme were wanting, there might yet be recognized what is known as a prose poem.

And let it be added that, were science and philosophy true, they would be the poem of the objective universe. But they are not true; and men have sharply distinguished them from the

poetry which has its truth in the concrete. When poetry treats them as facts, they are taken merely as facts in a thinker's life.

6. But poetry has not always been faithful to its peculiar method of perception. Even the poems of great poets sometimes degenerate into rhyming philosophies. Poetry cannot altogether withstand the influences of the times. Science and philosophy have often turned it aside from its proper path. It is the more easily diverted when it has not clearly formulated to itself its destiny. When poetry thus identifies itself with the modes of thought that are in vogue in science, the blunder is fatal. One of the most conspicuous illustrations of this kind of blunder is afforded by Wordsworth. He is a poet of the finest æsthetic feelings, and capable of the truest sympathy with certain orders of human experience. But in such a poem as *The Excursion* he devotes himself very largely to the reproduction of the abstractions of a somewhat commonplace metaphysics. There are, indeed, human figures moving in the poem; but it is not the poet's intention that interest should linger with them. He has a certain wisdom to communicate to us, and he chiefly wishes to express that wisdom in the formulas of any other poets

might be named who have, for longer or shorter periods, relapsed into the scientific mode of thought. Doubtless it has seemed to such that the principles they present are the true foundations of the universe, and that, therefore, in calling attention to them, they are making poetry the minister of truth. All the more is it necessary to show that, when poetry neglects the actual forms of concrete existence, it fails to fulfil its true function.

7. It is necessary, therefore, that poetry should realize that it depends upon the faculty of sympathetic imitation. Poetry should also realize that, while it is its privilege to be free, and rejoice in the world of its own creation, it may find not less glory in joining itself to science, and taking up the task of interpreting the actual facts of the universe.

What has been said of poetry applies to the other arts. Poetry, however, has the preëminence of most directly conveying the meaning of inner experience.

8. While it is necessary that art should realize its sympathetic function, it must also remember its more sensuous function. There seems, indeed, little reason at present for fearing that this will be forgotten. In painting and music especially, there is a demand for sensuous effects. It is important to

see the true justification of the search for such effects. By all the activities of the senses, the consciousness of the self is enriched, or the self is more fully revealed. It is true that in a sense the self is revealed in all its activities. Scientific formulas are activities or states of the self. The self, also, becomes conscious of itself in its sympathies, for, if it mirrors the whole universe, it is thereby at the same time discovering the riches of its own nature. But it is yet, in a measure, true that it is revealed most directly in its sensuous activities. All other revelations follow upon these. It is through them that the imaginings are possible by which the imitation of the sense-experiences of others is achieved. The concepts of the intellect, so often thought to be the peculiar revealers of the self, are the pale and faded products of sense. It is, therefore, important that this part of man's nature should be cultivated, in order that the greatest wealth of experience may be won. Sensation should be taken in its first intention; it should be realized in all the fulness of its own inner meaning. It is the function of sensuous art to find for the eye the fairest and most interesting colours; and for the ear the sweetest sounds; and to minister to each other sense according to its capacity; and, doing all this in h
dom, to give the soul more abu

9. The bearing of this theory of knowledge on questions of education must now be considered. The education of the intellect may be most adequately understood, if it be regarded as having in view two objects, which, though not ultimately separable, are yet relatively distinct, and may even appear to come into conflict; they are the two referred to above, utility and truth.

10. Considerations of utility have a very large place in human life. The struggle for existence makes it necessary that it should be so. Farms, factories, advertisements, are, in a large measure, illustrations of this struggle. Since man is under the law that he shall seek what ministers to his existence, or, in other words, what is useful to him, it is one of the first duties of the educator to fit the young for the search. The child must, therefore, be taught to read and write and cipher; that he may be still better equipped, he must learn foreign languages, and study science; he must also have training in his craft. In all this education there is a certain end in view, and other facts are considered only as they minister to this end. It is one refinement of this utilitarian view to claim that the object of education is mental discipline: the facts studied are as the food of the mind, valuable only when converted into mental muscle. It is not necessary to

enter further into the details of this utilitarian scheme of education. The importance of its place in human life must be recognized.

11. At the same time, the precise significance of this place should be understood. The ultimate end of useful actions must, when consciously present to the mind, be a conscious state. There may be reflex and instinctive actions which are useful, and yet have not this characteristic; but actions due to man's device have generally some form of conscious well-being as their end, either that of the worker himself, or that of some one for whom he works. The end of such activities is thus the enlarging and perfecting of self-consciousness. And, if there are actions planned by man which have no personal good in view, but are planned from the habit of planning, they yet, as ideo-motor, have it as their end that self-consciousness be more fully realized. We thus see that the great utilities of life minister to that self-consciousness which is in a preëminent sense the truth. Utility and truth were said to be relatively distinct: we now see that, so far at least as utility is a conscious scheme, they ultimately merge in one. We also see how the utilities of life are related to the fine arts, so far as these are sensuous: both contribute directly to the subjective life. It can also be seen that both require that the

educator should aim primarily at the cultivation of the senses. This cultivation is necessary for all knowledge; what must be pointed out here is its strange neglect by those who, while training for the life of utility, neglect the faculties by which the results of these utilities are appropriated. It should be the aim of the educator to train the senses; to develop the activities, and thus gain the finer perceptions which accompany these activities; and to cultivate those sense-experiences which are spoken of as more internal and subjective, and which go to constitute the emotional life. In so far as education is the drawing out of the self, it is in this way that its function is in part fulfilled.

12. But not only must the educator aim at the development of the self in its more subjective aspect, he must also aim at the development of consciousness as it is determined by the movement of objects independent of the mind. He must teach facts, not only as they are in their use, but also as they are in themselves apart from this use. For the drawing out of the soul means that it is enriched in sensuous, subjective experience, and, also, that it is enriched by sharing the experience of other persons and things.

13. We have seen that science implies a certain alienation from truth. Emerson writes in his essay

on Beauty:[1] "The spiral tendency of vegetation infects education also. Our books approach very slowly the things we most wish to know. What a parade we make of our science, and how far off, and at arm's length, it is from its objects! . . . We should go to the ornithologist with a new feeling if he could teach us what the social birds say when they sit in the autumn council talking together in the trees. The want of sympathy makes his record a dull dictionary. His result is a dead bird. The bird is not in its ounces and inches, but in its relations to nature; and the skin or skeleton you show me is no more a heron than a heap of ashes or a bottle of gases, into which his body has been reduced, is Dante or Washington. The naturalist is led *from* the road by the whole distance of his fancied advance." Emerson does not hold steadily to a precise idea of that which is lacking in scientific education; yet he indicates that one thing that is needed is sympathy. The present investigation has enabled us to see how much emphasis should be put on this faculty when education aims at truth.

14. It may in this connection be of interest to consider the much-discussed question of the studies that should be included in a course of education. It used [illegible] that the classics must

constitute an essential part of any education which had more than the primary utilitarian elements. The natural sciences, however, forced themselves into prominence, and the claim was made for them that they were as good instruments of education as the classics, or even better. It is now frequently said that all subjects are of equal educational value. If, in the comparison of these studies, attention is given simply to a restricted view of their disciplinary value, it lies outside of our present purpose to discuss their merits; it may be that the study of chemistry is neither more nor less disciplinary than the study of the Latin grammar. But when we consider the different studies with respect to the directness with which they conduct to truth, we must hesitate to put them all on the same plane. We have seen that poetry and science are each imperfect being alone. Therefore, education must join the studies which by their combination give truth. Moreover, we cannot even say that all studies are of equal disciplinary value, when a broader view is taken of mental discipline. If the discipline is to result in a mental aptitude for truth, that aptitude must surely fail to be secured when there is no exercise in one kind of perception that is essential to truth-getting. A training in literature without science is defective; an education that consists

merely in scientific training is still more gravely at fault.

15. It is also to be noticed that the objects of which the truth can be most surely attained are human beings. It is, therefore, to the studies which deal with these objects that we must turn for the most complete truth. That is, the humanities must be regarded as yielding, in combination with the scientific study of man, the clearest perception of truth. It must, indeed, be remembered that the same problems arise when other objects in the organic and inorganic world are considered. But the fact remains that we do not know these so easily; other things, or other souls, are not known at present as the human soul is; the farther we go from man, the more impenetrable is the mystery of things. We may hope some day to know other things as we are known, but it must be acknowledged that this ideal is still far off.

16. It is necessary to bear in mind a qualification of this statement regarding the excellence of the humanities. It is possible to study the literature of the world in a purely scientific way. The study of poetry often becomes a research into grammar and philology and history. Of such research it may justly be said that its claims to superiority over chemical or biological research are, at least, very

doubtful. But it is when poetry is understood in its true nature, and is regarded as being in some of its forms an interpretation of objective existence, that its value in education is recognized.

17. It need scarcely be pointed out that at present such a scheme of education provides instruction in the method of truth rather than truth itself; for a literature or a science that is truthful, in the absolute sense, is still in large measure to seek.

18. It is further necessary for the perception of truth that the faculty of sympathetic imitation should be carefully cultivated from childhood. It shows itself early, but as a rule it soon loses its first vigour. It is laughed at by a thoughtless world, and shrinks from observation. The need of struggling for existence, and of clearing away everything which does not help in that struggle, is fatal to its finer activities. The shades of the prison-house begin to close upon it. But were this faculty valued according to its worth, the loss of it would be deplored as the loss of sight or hearing. No pains would be spared to preserve and refine it in those in whom it shows itself, and to rouse it into life in those in whom it seems dormant. Something has been done, as in certain forms of kinderga

tion, to develop this form of perception, but such efforts have been unsystematic and incomplete. An education is needed which shall make the power of sympathetic imitation one of its grand objects.

19. There is a further lesson to be learned, which has reference to the cultivation of the moral life. We have already seen that love is the fulfilment of social duty, and that the centre and heart of love is sympathy: we have also seen that by true knowledge intellectual selfishness is in large measure excluded. It may now be pointed out that it is by sympathy that men receive the strongest impulses to virtue. It is customary to teach morals by abstract precepts; and these are useful, or even, in a sense, indispensable. They are, however, of the nature of scientific generalizations, even when they wear the form of the categorical imperative. They are able to move men to moral action, for general principles have the power of determining action; but they are not the great inspirers to morality. Men are moved by examples. When Dante is describing the sanctification of the penitents in purgatory, he is careful to tell what is done to inculcate the virtues that are to be acquired. It is interesting to notice that almost invariably this is done by means of examples. The penitents are

not told to be humble: David, the king of Israel, is seen dancing before the ark. To pass to the highest illustration of the influence of sympathy in the ethical life, how many from whom moral exhortations have glanced ineffective have had their religious enthusiasm kindled to flame when they have "seen Jesus." Nor are we to say that this is owing to the weakness of men, and that it were better could they obey the dictates of pure reason. It is in accordance with the true nature of morality, which has its being in the fellowship of human souls, and draws its deepest inspiration from such fellowship. Moral precepts, while of great utility, are only means to ends, and to rest contented with them is to suffer a desiccation of spirit. Let the moral training, therefore, of young and old be conducted in view of the principles of human nature. Let them be compassed about with a cloud of those in all ages who have lived the good life. Let them be the familiar friends of the world's saints and heroes, in whose fashion their spirits may thus be formed. Or let them be placed in the society of living men and women who are aiming at perfection, and still more quickly they will know, through imitation, what goodness is, and let it find a place in their lives.

20. An ethical question of another kind may be raised: Is knowledge desirable? Is it good for men to enter into the thoughts of the wicked, and live over their injustice and uncleanness? It can be seen that men must choose, as far as possible, what they wish to know. There may be many things which it is not well for them to know, except in a symbolic way. It is for each one to decide how far, for the sake of his spiritual well-being, he must restrict his sympathies; for to one that may be life-giving which to his neighbour brings death.

21. A deeper ethical question still remains. Is knowledge of other things, after all, an end in itself? Conduct is often said to be the supreme end of life; and, if it is, knowledge must be ultimately a means to that end. The question, therefore, how truth is to be attained, must seem a relatively unimportant one; for if truth is subordinate to something else, a set of symbols, or anything by which we can be guided to the supreme end, must seem sufficient for us. A full justification of the assumption that knowledge is an end in itself cannot be here attempted. However, the whole discussion in this work has, in a measure, provided this justification; we have also seen that to a large extent the antithesis of knowledge and conduct is false. It may further be suggested that that life is most divine

which most feels the world as it is felt by the absolute being; and that it is by such feeling or knowledge that man can reach that religious exaltation when it may in truth be said to him, "All things are yours."

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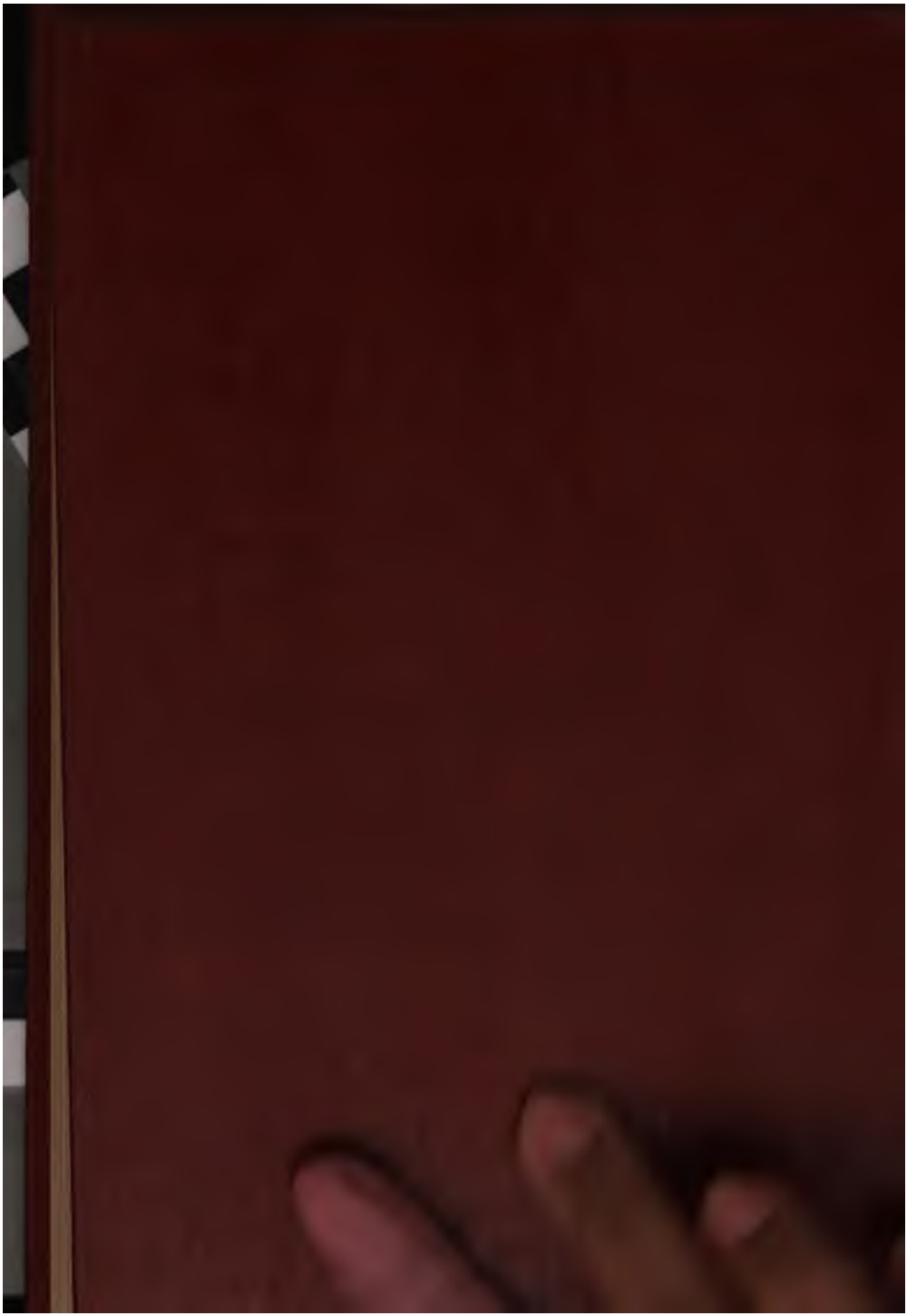
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